

STATE OF MISSOURI
DEPARTMENT OF NATURAL RESOURCES
MISSOURI CLEAN WATER COMMISSION



MISSOURI STATE OPERATING PERMIT

In compliance with the Missouri Clean Water Law, (Chapter 644 R.S. Mo. as amended, hereinafter, the Law), and the Federal Water Pollution Control Act (Public Law 92-500, 92nd Congress) as amended,

Permit No. MO-0136450

Owner: BFI Services
Address: 4601 Cahokia Creek Road, Edwardsville, IL 62025

Continuing Authority: Republic Services, Inc.
Address: 12976 St. Charles Rock Road, Bridgeton, MO 63044

Facility Name: Jeffco Landfill
Address: 1650 Old Missouri State Highway 21, Arnold, MO 63010

Legal Description: SEE PAGE TWO
UTM Coordinates: SEE PAGE TWO

Receiving Stream: SEE PAGE TWO
First Classified Stream and ID: SEE PAGE TWO
USGS Basin & Sub-watershed No.: SEE PAGE TWO

is authorized to discharge from the facility described herein, in accordance with the effluent limitations and monitoring requirements as set forth herein:

FACILITY DESCRIPTION

Outfall # 001 - Landfill - SIC #4953

Single cell, no discharge lagoon system /irrigation onto top of landfill/sludge is retained in lagoon.
Design flow is 12,500 gallons per day (1-in-10 year design including net rainfall minus evaporation).
Average design flow is 12,000 gallons per day (dry weather flows).

Continued on page 2.

This permit authorizes only wastewater discharges under the Missouri Clean Water Law and the National Pollutant Discharge Elimination System; it does not apply to other regulated areas. This permit may be appealed in accordance with Section 644.051.6 of the Law.

August 1, 2013

Effective Date

Sara Parker Pauley, Director, Department of Natural Resources

June 30, 2018

Expiration Date

John Madras, Director, Water Protection Program

FACILITY DESCRIPTION (continued)

Outfall #001 - Storage Basin operational monitoring

Legal Description: NE ¼, NE ¼, SW ¼, Sec. 22, T43N, R5E, Jefferson County

UTM Coordinates: X = 722519, Y = 4258444

Receiving Stream: Unnamed Tributary to Meramec River (U) (Losing)

First Classified Stream and ID: Meramec River (P) (02183)

USGS Basin & Sub-watershed No.: (07140102-1004)

Receiving Stream Watershed: A losing stream setting

Facility Type:

No discharge Storage and Irrigation System

Design Basis:

Average Annual Flow

Design dry weather flows 12,000 Gallons per Day

Design with 1-in-10 year flows 12,500 Gallons per Day

Storage Basin/Tank:

Freeboard for basin: 1.5 feet

Storage volume (minimum to maximum water levels) 1,000,000 gallons

Storage Capacity (in Days):

Design with 1-in 10 year flows: 80 days;

Land Application:

Irrigation Volume/year: 4,562,500 gallons (including 1-in-10 year flows)

Outfall #002 – Land application to landfill cap

Legal Description: NE ¼, SW ¼, SW ¼, Sec. 22, T43N, R5E, Jefferson County

UTM Coordinates: X = 722192, Y = 4258356

Receiving Stream: Unnamed Tributary to Meramec River (U) (Losing)

First Classified Stream and ID: Meramec River (P) (02183)

USGS Basin & Sub-watershed No.: (07140102-1004)

Irrigation areas: 5.7 acres at design loading

Application rates: 0.003 inches/hour; 0.08 inches/day; 0.6 inches/week; 28.7 inches/year

Field slopes: less than 9 percent

Equipment type: Surface and subsurface drip irrigation system

Vegetation: Pasture and Timber

Application rate is based on: Availability of Leachate and Season

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS					PAGE NUMBER 3 of 10	
					PERMIT NUMBER MO-0136450	
The permittee is authorized to discharge from outfall(s) with serial number(s) as specified in the application for this permit. The final effluent limitations shall become effective upon issuance and remain in effect until expiration of the permit. Such discharges shall be controlled, limited and monitored by the permittee as specified below:						
OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	FINAL EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
<u>Outfall #001</u> - Storage Basin Operational Monitoring (Notes 1, 2 & 3)						
Lagoon Freeboard	feet	*			once/month	measured
Rainfall	inches	*			daily	total
<u>Outfall #002</u> - Land application to landfill cap (Notes 2, 3 & 4)						
pH - Units	SU	**			once/month	grab
Irrigation Period	hours	*			daily	total
Volume Irrigated	gallons	*			daily	total
Application Area	acres	*			daily	total
Application Rate	inches	*			daily	total
MONITORING REPORTS SHALL BE SUBMITTED <u>ANNUALLY</u> ; THE FIRST REPORT IS DUE <u>June 28, 2014</u> .						
B. STANDARD CONDITIONS						
IN ADDITION TO SPECIFIED CONDITIONS STATED HEREIN, THIS PERMIT IS SUBJECT TO THE ATTACHED <u>Parts I & III</u> STANDARD CONDITIONS DATED <u>October 1, 1980 & August 15, 1994</u> AND HEREBY INCORPORATED AS THOUGH FULLY SET FORTH HEREIN.						

* Monitoring requirement only.

** pH is measured in pH units and is not to be averaged. The pH is limited to the range of 6.5-9.0 pH units.

Note 1 - **No-discharge facility requirements.** Wastewater shall be stored and land applied during suitable conditions so that there is no-discharge from the lagoon or irrigation site. An emergency discharge may occur when excess wastewater has accumulated above feasible irrigation rates due to precipitation exceeding the 1-in-10-year 365 day rain fall or the 25-year 24-hour storm event.

Note 2 - Records shall be maintained and summarized into an annual operating report, which shall be submitted by January 28th of each year for the previous calendar year period using report forms approved by the Department. The report shall include the following:

- a. Record of maintenance and repairs performed during the year, average number of times per month the facility is checked to see if it is operating properly, and description of any unusual operating conditions encountered during the year;
- b. The number of days the lagoon has discharged during the year, the discharge flow, the reasons discharge occurred and effluent analysis performed; and
- c. A summary of the irrigation operations including freeboard at the start and end of the irrigation season, the number of days of irrigation for each month, the total gallons irrigated, the total acres used, crops grown, crop yields per acre, the application rate in inches/acre per day and for the year, the monthly and annual precipitation received at the facility and summary of testing results. This report is in addition to the reporting requirements of Table A, Effluent Limitations and Monitoring Requirements.

Note 3 - Lagoon freeboard shall be reported as lagoon water level in feet below the overflow level. See Special Conditions for Wastewater Irrigation System requirements.

Note 4 - Wastewater that is irrigated shall be sampled at the irrigation pump or wet well.

C. SPECIAL CONDITIONS

1. Report as no-discharge when a discharge does not occur during the report period.
2. Outfalls must be marked in field and on the topographic site map submitted with the permit application.
3. Water Quality Standards
 - a. To the extent required by law, discharges to waters of the state shall not cause a violation of water quality standards rule under 10 CSR 20-7.031, including both specific and general criteria.
 - b. General Criteria. The following general water quality criteria shall be applicable to all waters of the state at all times including mixing zones. No water contaminant, by itself or in combination with other substances, shall prevent the waters of the state from meeting the following conditions:
 - (1) Waters shall be free from substances in sufficient amounts to cause the formation of putrescent, unsightly or harmful bottom deposits or prevent full maintenance of beneficial uses;
 - (2) Waters shall be free from oil, scum and floating debris in sufficient amounts to be unsightly or prevent full maintenance of beneficial uses;
 - (3) Waters shall be free from substances in sufficient amounts to cause unsightly color or turbidity, offensive odor or prevent full maintenance of beneficial uses;
 - (4) Waters shall be free from substances or conditions in sufficient amounts to result in toxicity to human, animal or aquatic life;
 - (5) There shall be no significant human health hazard from incidental contact with the water;
 - (6) There shall be no acute toxicity to livestock or wildlife watering;
 - (7) Waters shall be free from physical, chemical or hydrologic changes that would impair the natural biological community;
 - (8) Waters shall be free from used tires, car bodies, appliances, demolition debris, used vehicles or equipment and solid waste as defined in Missouri's Solid Waste Law, section 260.200, RSMo, except as the use of such materials is specifically permitted pursuant to section 260.200-260.247.
4. This permit may be reopened and modified, or alternatively revoked and reissued, to:
 - (a) Comply with any applicable effluent standard or limitation issued or approved under Sections 301(b)(2)(C) and (D), 304(b)(2), and 307(a) (2) of the Clean Water Act, if the effluent standard or limitation so issued or approved:
 - (1) contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or
 - (2) controls any pollutant not limited in the permit.
 - (b) Incorporate new or modified effluent limitations or other conditions, if the result of a waste load allocation study, toxicity test or other information indicates changes are necessary to assure compliance with Missouri's Water Quality Standards.
 - (c) Incorporate new or modified effluent limitations or other conditions if, as the result of a watershed analysis, a Total Maximum Daily Load (TMDL) limitation is developed for the receiving waters which are currently included in Missouri's list of waters of the state not fully achieving the state's water quality standards, also called the 303(d) list.

The permit as modified or reissued under this paragraph shall also contain any other requirements of the Clean Water Act then applicable.

5. Changes in Discharges of Toxic Substances

The permittee shall notify the Director as soon as it knows or has reason to believe:

- (a) That any activity has occurred or will occur which would result in the discharge of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels:"
 - (1) One hundred micrograms per liter (100 µg/L);
 - (2) Two hundred micrograms per liter (200 µg/L) for acrolein and acrylonitrile; five hundred micrograms per liter (500 µg/L) for 2,5 dinitrophenol and for 2-methyl-4, 6-dinitrophenol; and one milligram per liter (1 mg/L) for antimony;
 - (3) Five (5) times the maximum concentration value reported for the pollutant in the permit application;
 - (4) The level established by the Director in accordance with 40 CFR 122.44(f).
- (b) That they have begun or expect to begin to use or manufacture as an intermediate or final product or byproduct any toxic pollutant, which was not reported in the permit application.

C. SPECIAL CONDITIONS (continued)

6. Wastewater Irrigation System.

- a. Discharge Reporting. Any unauthorized discharge from the lagoon or irrigation system shall be reported to the Department as soon as possible but always within 24 hours. Discharge is allowed only as described in the Facility Description and Effluent Limitations sections of this permit. The permittee shall within 60 days of any discharge of the lagoon submit a report to the Department outlining the cause(s) of the discharge and implement whatever means necessary to prevent future discharges.
- b. Lagoon Operating Levels - No-discharge Systems. The minimum and maximum operating water levels for the storage lagoon shall be clearly marked. Each lagoon shall be operated so that the maximum water elevation does not exceed one foot below the Emergency Spillway except due to exceedance of the 1-in-10 year or 25-year-24 hour storm events. The 1-in-10 year Wastewater shall be land applied whenever feasible based on soil and weather conditions and permit requirements.
- c. Emergency Spillway. Lagoons and earthen storage basins should have an emergency spillway to protect the structural integrity of earthen structures during operation at near full water levels and in the event of overflow conditions. The spillway shall be at least one foot below top of berm. The Department may waive the requirement for overflow structures on small existing basins.
- d. General Irrigation Requirements. The wastewater irrigation system shall be operated so as to provide uniform distribution of irrigated wastewater over the entire irrigation site. A complete ground cover of vegetation shall be maintained on the irrigation site unless the system is approved for row crop irrigation.
- e. Saturated/Frozen Conditions. There shall be no surface irrigation during frozen, snow covered, or saturated soil conditions. This system shall be started manually, and have an automatic shutoff timer.
- f. Buffer Zones. There shall be no irrigation within 300 feet of any down gradient pond, lake, sinkhole, losing stream or water supply withdrawal; 100 feet of gaining streams or tributaries; 150 feet of dwelling or public use areas; or 50 feet of the property line.
- g. Public Access Restrictions. Public access shall not be allowed to the irrigation sites at Outfall #002.
- h. Operation and Maintenance Manual. The permittee shall develop, maintain and implement an Operation and Maintenance (O&M) Manual that includes all necessary items to ensure the operation and integrity of the waste handling and land application systems. Copies of the O&M Manual and subsequent revisions shall be submitted to Regional Office for review and approval. The O&M Manual shall be reviewed and updated at least every five years.
- i. Equipment Checks during Irrigation. The irrigation system and application site shall be visually inspected at least once/month during wastewater irrigation to check for equipment malfunctions and runoff from the irrigation site.

7. Stormwater Pollution Prevention Plan

The permittee shall develop and implement a Storm Water Pollution Prevention Plan (SWPPP). The SWPPP must be prepared within 30 days and implemented within 90 days of permit issuance. The SWPPP must be kept on-site and should not be sent to DNR unless specifically requested. The SWPPP must be reviewed and updated, if needed, every five (5) years or as site conditions change. The permittee shall select, install, use, operate, and maintain the Best Management Practices prescribed in the SWPPP in accordance with the concepts and methods described in the following document:

Developing Your Stormwater Pollution Prevention Plan, A Guide for Industrial Operators, (Document number EPA 833-B-09-002) published by the United States Environmental Protection Agency (USEPA) in February 2009.

The SWPPP must include the following:

- (a) A listing of specific Best Management Practices (BMPs) and a narrative explaining how BMPs will be implemented to control and minimize the amount of potential contaminants that may enter storm water. Minimum BMPs are listed in SPECIAL CONDITIONS #7 below.

C. SPECIAL CONDITIONS (continued)

- (b) The SWPPP must include a schedule for a bi-monthly site inspection and a brief written report. The inspections must include observation and evaluation of BMP effectiveness. Deficiencies must be corrected within seven (7) days and the actions taken to correct the deficiencies shall be included with the written report, including photographs. Any corrective measure that necessitates major construction may also need a construction permit. Inspection reports must be kept on site with the SWPPP and maintained for a period of five (5) years. These must be made available to DNR personnel upon request.
 - (c) A provision for designating an individual to be responsible for environmental matters.
 - (d) A provision for providing training to all personnel involved in material handling and storage, and housekeeping of maintenance and cleaning areas. Proof of training shall be submitted on request of DNR.
8. Permittee shall adhere to the following minimum Best Management Practices:
- (a) Prevent the spillage or loss of fluids, oil, grease, fuel, etc. from vehicle maintenance, equipment cleaning, or warehouse activities and thereby prevent the contamination of storm water from these substances.
 - (b) Provide collection facilities and arrange for proper disposal of waste products including but not limited to petroleum waste products, and solvents.
 - (c) Store all paint, solvents, petroleum products and petroleum waste products (except fuels), and storage containers (such as drums, cans, or cartons) so that these materials are not exposed to storm water or provide other prescribed BMP's such as plastic lids and/or portable spill pans to prevent the commingling of storm water with container contents. Commingled water may not be discharged under this permit. Provide spill prevention control, and/or management sufficient to prevent any spills of these pollutants from entering waters of the state. Any containment system used to implement this requirement shall be constructed of materials compatible with the substances contained and shall also prevent the contamination of groundwater.
 - (d) Provide good housekeeping practices on the site to keep trash from entry into waters of the state.
 - (e) Provide sediment and erosion control sufficient to prevent or control sediment loss off of the property. This could include the use of straw bales, silt fences, or sediment basins, if needed, to comply with effluent limits.
9. The purpose of the SWPPP and the BMPs listed herein is the prevention of pollution of waters of the state. A deficiency of a BMP means it was not effective in preventing pollution [10 CSR 20-2.010(56)] of waters of the state, and corrective actions means the facility took steps to eliminate the deficiency.
10. All fueling facilities present on the site shall adhere to applicable federal and state regulations concerning underground storage, above ground storage, and dispensers, including spill prevention, control and counter measures.
11. Release of a hazardous substance equal to or in excess of the reportable quantity found at 40 CFR 302.4 must be reported to the Department at the earliest practicable moment, but no greater than 24 hours after the spill occurs.

C. SPECIAL CONDITIONS (continued)

12. Emergency Discharge.

Outfall #001 may only discharge if rainfall exceeds the 1 in 10 year (Data taken from the Missouri Climate Atlas) or the 24 hour, 25 year (Data taken from NRCS Urban Hydrology for Small Watersheds) rainfall events. **Discharge for any other reason shall constitute a permit violation and shall be recorded in accordance with Standard Conditions, Part 1, Section B.2.b.** Monitoring shall take place once per day while discharging. Test results are due on the 28th day of the month after the cessation of the discharge. Permittee shall monitor for the following parameters:

Parameter	Units
Flow	MGD
Biochemical Oxygen Demand ₅	mg/L
Total Suspended Solids	mg/L
pH – Units	Standard Units
Acute WET test	See Below

SUMMARY OF ACUTE WET TESTING FOR THIS PERMIT					
OUTFALL	AEC	LC50%*	FREQUENCY	SAMPLE TYPE	MONTH
001	100%	100%	Any Discharge	Grab	Any

* LC50 = AEC / 0.3.

Dilution Series						
100%	50%	25%	12.5%	6.25%	(Control) 100% upstream, if available	(Control) 100% Lab Water, also called synthetic water

(a) Test Schedule and Follow-Up Requirements

- (1) Perform a MULTIPLE-dilution acute WET test in the months and at the frequency specified above. For tests which are successfully passed, submit test results using the Department’s WET test report form #MO-780-1899 along with complete copies of the test reports as received from the laboratory, including copies of chain-of-custody forms within 30 calendar days of availability to the WATER PROTECTION PROGRAM, P.O. Box 176, Jefferson City, MO 65102. If the effluent passes the test, do not repeat the test until the next test period.
 - (i) For discharges of stormwater, samples shall be collected within three hours from when discharge first occurs.
 - (ii) Samples submitted for analysis of stormwater discharges shall be collected as a grab.
 - (iii) For discharges of non-stormwater, samples shall be collected only when precipitation has not occurred for a period of forty-eight hours prior to sample collection. In no event shall sample collection occur simultaneously with the occurrence of precipitation excepting for stormwater samples.
 - (iv) A twenty-four hour composite sample shall be submitted for analysis of non-stormwater discharges.
 - (v) Upstream receiving water samples, where required, shall be collected upstream from any influence of the effluent where downstream flow is clearly evident.
 - (vi) Samples submitted for analysis of upstream receiving water may be collected as either a grab or twenty-four-hour composite as appropriate to the nature of the discharge.
 - (vii) Chemical and physical analysis of the upstream control and effluent sample shall occur immediately upon being received by the laboratory, prior to any manipulation of the effluent sample beyond preservation methods consistent with federal guidelines for WET testing that are required to stabilize the sample during shipping.
 - (viii) Any and all chemical or physical analysis of the effluent sample performed in conjunction with the WET test shall be performed at the 100% Effluent concentration in addition to analyses performed upon any other effluent concentration.
 - (ix) All chemical analyses included in the Missouri Department of Natural Resources WET test report form #MO-780-1899 shall be performed and results shall be recorded in the appropriate field of the report form.
 - (x) Where flow-weighted composite sample is required for analysis, the samples shall be composited at the laboratory where the test is to be performed.

C. SPECIAL CONDITIONS (continued)

- (xi) Where in stream testing is required downstream from the discharge, sample collection shall occur immediately below the established Zone of Initial Dilution in conjunction with or immediately following a release or discharge.
 - (xii) Samples submitted for analysis of downstream receiving water may be collected as either a grab or twenty-four-hour composite as appropriate to the nature of the discharge.
 - (xiii) All instream samples, including downstream samples, shall be tested for toxicity at the 100% concentration in addition to any other assigned AEC for in-stream samples.
- (2) All failing test results along with complete copies of the test reports as received from the laboratory, INCLUDING THOSE TESTS CONDUCTED UNDER CONDITION (3) BELOW, shall be reported to the WATER PROTECTION PROGRAM, P.O. Box 176, Jefferson City, MO 65102 within 14 calendar days of the availability of the results.
- (3) If the effluent fails the test, a multiple dilution test shall be performed for BOTH test species within 30 calendar days and biweekly thereafter (for storm water, tests shall be performed on the next and subsequent storm water discharges as they occur, but not less than 7 days apart) until one of the following conditions are met:
- (i) THREE CONSECUTIVE MULTIPLE-DILUTION TESTS PASS. No further tests need to be performed until next regularly scheduled test period.
 - (ii) A TOTAL OF THREE MULTIPLE-DILUTION TESTS FAIL.
- (4) Failure of a WET test is a violation of this permit.
- (5) The permittee shall submit a summary of all test results for the test series along with complete copies of the test reports as received from the laboratory to the WATER PROTECTION PROGRAM, P.O. Box 176, Jefferson City, MO 65102 within 14 calendar days of the third failed test.
- (6) Additionally, the following shall apply upon failure of ANY MULTIPLE DILUTION test: A toxicity identification evaluation (TIE) or toxicity reduction evaluation (TRE) is automatically triggered. The permittee shall contact THE WATER PROTECTION PROGRAM within 14 calendar days from availability of the test results to ascertain as to whether a TIE or TRE is appropriate. The permittee shall submit a plan for conducting a TIE or TRE to the WATER PROTECTION PROGRAM within 60 calendar days of the date of DNR's direction to perform either a TIE or TRE. This plan must be approved by DNR before the TIE or TRE is begun. A schedule for completing the TIE or TRE shall be established in the plan approval.
- (7) Upon DNR's approval, the TIE/TRE schedule may be modified if toxicity is intermittent during the TIE/TRE investigations. A revised WET test schedule may be established by DNR for this period.
- (8) If a previously completed TIE has clearly identified the cause of toxicity, additional TIEs will not be required as long as effluent characteristics remain essentially unchanged and the permittee is proceeding according to a DNR approved schedule to complete a TRE and reduce toxicity. Regularly scheduled WET testing as required in the permit, without the follow-up requirements, will be required during this period.
- (9) Submit a concise summary in tabular format of all WET test results with the annual report.
- (b) PASS/FAIL procedure and effluent limitations:
- (1) To pass a multiple-dilution test:
 - (i) For facilities with a computed percent effluent at the edge of the zone of initial dilution, Allowable Effluent Concentration (AEC) OF 30% OR LESS, the AEC must be less than three-tenths (0.3) of the LC₅₀ concentration for the most sensitive of the test organisms; **OR**,
 - (ii) For facilities with an AEC greater than 30%, the LC₅₀ concentration must be greater than 100%; **AND**,
 - (iii) All effluent concentrations equal to or less than the AEC must be nontoxic. Mortality observed in all effluent concentrations equal to or less than the AEC shall not be significantly different (at the 95% confidence level; p = 0.05) than that observed in the upstream receiving-water control sample. Where upstream receiving water is not available mortality observed in the AEC test concentration shall not be significantly different (at the 95% confidence level; p = 0.05) than that observed in the laboratory control. The appropriate statistical tests of significance shall be consistent with the most current edition of METHODS FOR MEASURING THE ACUTE TOXICITY OF EFFLUENTS AND RECEIVING WATERS TO FRESHWATER AND MARINE ORGANISMS or other federal guidelines as appropriate or required.

C. SPECIAL CONDITIONS (continued)

(c) Test Conditions

- (1) Test Type: Acute Static non-renewal
- (2) All tests, including repeat tests for previous failures, shall include both test species listed below.
- (3) Test species: *Ceriodaphnia dubia* and *Pimephales promelas* (fathead minnow). Organisms used in WET testing shall come from cultures reared for the purpose of conducting toxicity tests and cultured in a manner consistent with the most current USEPA guidelines. All test animals shall be cultured as described in the most current edition of Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms.
- (4) Test period: 48 hours at the "Allowable Effluent Concentration" (AEC) specified above.
- (5) Upstream receiving stream water shall be used as dilution water. If upstream water is unavailable or if mortality in the upstream water exceeds 10%, "reconstituted" water will be used as dilution water. Procedures for generating reconstituted water will be supplied by the MDNR upon request.
- (6) Unless otherwise specified above, multiple-dilution tests will be run with:
 - (i) 100%, 50%, 25%, 12.5%, and 6.25% effluent, unless the AEC is less than 25% effluent, in which case dilutions will be 4 times the AEC, two times the AEC, AEC, 1/2 AEC and 1/4 AEC;
 - (ii) 100% receiving-stream water (if available), collected upstream of the outfall at a point beyond any influence of the effluent; and
 - (iii) Reconstituted water.
- (7) If reconstituted-water control mortality for a test species exceeds 10%, the entire test will be rerun.
- (8) If upstream control mortality exceeds 10%, the entire test will be rerun using reconstituted water as the dilutant.

C. SPECIAL CONDITIONS (continued)

SUMMARY OF TEST METHODOLOGY FOR ACUTE WHOLE-EFFLUENT TOXICITY TESTS

Whole-effluent-toxicity test required in NPDES permits shall use the following test conditions when performing single or multiple dilution methods. Any future changes in methodology will be supplied to the permittee by the Missouri Department of Natural Resources (MDNR). Unless more stringent methods are specified by the DNR, the procedures shall be consistent with the most current edition of Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms.

Test conditions for Ceriodaphnia dubia:

Test duration:	48 h
Temperature:	25 ± 1°C Temperatures shall not deviate by more than 3°C during the test.
Light Quality:	Ambient laboratory illumination
Photoperiod:	16 h light, 8 h dark
Size of test vessel:	30 mL (minimum)
Volume of test solution:	15 mL (minimum)
Age of test organisms:	<24 h old
No. of animals/test vessel:	5
No. of replicates/concentration:	4
No. of organisms/concentration:	20 (minimum)
Feeding regime:	None (feed prior to test)
Aeration:	None
Dilution water:	Upstream receiving water; if no upstream flow, synthetic water modified to reflect effluent hardness.
Endpoint:	Pass/Fail (Statistically significant Mortality when compared to upstream receiving water control or synthetic control if upstream water was not available at $p \leq 0.05$)
Test acceptability criterion:	90% or greater survival in controls

Test conditions for Pimephales promelas:

Test duration:	48 h
Temperature:	25 ± 1°C Temperatures shall not deviate by more than 3°C during the test.
Light Quality:	Ambient laboratory illumination
Photoperiod:	16 h light/ 8 h dark
Size of test vessel:	250 mL (minimum)
Volume of test solution:	200 mL (minimum)
Age of test organisms:	1-14 days (all same age)
No. of animals/test vessel:	10
No. of replicates/concentration:	4 (minimum) single dilution method 2 (minimum) multiple dilution method
No. of organisms/concentration:	40 (minimum) single dilution method 20 (minimum) multiple dilution method
Feeding regime:	None (feed prior to test)
Aeration:	None, unless DO concentration falls below 4.0 mg/L; rate should not exceed 100 bubbles/min.
Dilution water:	Upstream receiving water; if no upstream flow, synthetic water modified to reflect effluent hardness.
Endpoint:	Pass/Fail (Statistically significant Mortality when compared to upstream receiving water control or synthetic control if upstream water was not available at $p \leq 0.05$)
Test Acceptability criterion:	90% or greater survival in controls

Missouri Department of Natural Resources
FACT SHEET
FOR THE PURPOSE OF CONSTRUCTION
OF
MO-0136450
JEFFCO LANDFILL

The Federal Water Pollution Control Act ("Clean Water Act" Section 402 Public Law 92-500 as amended) established the National Pollution Discharge Elimination System (NPDES) permit program. This program regulates the discharge of pollutants from point sources into the waters of the United States, and the release of storm water from certain point sources. All such discharges are unlawful without a permit (Section 301 of the "Clean Water Act"). After a permit is obtained, a discharge not in compliance with all permit terms and conditions is unlawful. Missouri State Operating Permits (MSOPs) are issued by the Director of the Missouri Department of Natural Resources (Department) under an approved program, operating in accordance with federal and state laws (Federal "Clean Water Act" and "Missouri Clean Water Law" Section 644 as amended). MSOPs are issued for a period of five (5) years unless otherwise specified.

As per [40 CFR Part 124.8(a)] and [10 CSR 20-6.020(1)2.] a Factsheet shall be prepared to give pertinent information regarding the applicable regulations, rationale for the development of effluent limitations and conditions, and the public participation process for the Missouri State Operating Permit (operating permit) listed below.

A Factsheet is not an enforceable part of an operating permit.

This Factsheet is for a Major , Minor , Industrial Facility ; Variance ;
 Master General Permit ; General Permit Covered Facility ; and/or permit with widespread public interest .

Part I – Facility Information

Facility Type: Solid Waste Landfill
 Facility SIC Code(s): 4953

Facility Description:
 Single cell, no discharge lagoon system /irrigation onto top of landfill/sludge is retained in lagoon.

Application Date: June 9, 2010
 Expiration Date: Not Applicable
 Last Inspection: Not Applicable In Compliance; Non-Compliance

OUTFALL(S) TABLE:

OUTFALL	DESIGN FLOW (CFS)	TREATMENT LEVEL	EFFLUENT TYPE	DISTANCE TO CLASSIFIED SEGMENT (MI)
001	0.019	Equivalent to secondary	Leachate	2.14
002	N/A	Land application to landfill cap	N/A	N/A

Outfall #001 - Storage Basin operational monitoring
 Legal Description: NE ¼, NE ¼, SW ¼, Sec. 22, T43N, R5E, Jefferson County
 UTM Coordinates: X = 722519, Y = 4258444
 Receiving Stream: Unnamed Tributary to Meramec River (U) (Losing)
 First Classified Stream and ID: Meramec River (P) (02183)
 USGS Basin & Sub-watershed No.: (07140102-1004)

Outfall #002 – Land application to landfill cap
 Legal Description: NE ¼, SW ¼, SW ¼, Sec. 22, T43N, R5E, Jefferson County
 UTM Coordinates: X = 722192, Y = 4258356
 Receiving Stream: Unnamed Tributary to Meramec River (U) (Losing)
 First Classified Stream and ID: Meramec River (P) (02183)
 USGS Basin & Sub-watershed No.: (07140102-1004)

Water Quality History:

New System, no history.

Comments:

Jeffco Landfill is a closed, pre-subtitle D solid waste landfill. This permit incorporates features from several different permits typically issued by the Department, specifically; No Discharge Systems, Landfill Activities, and Whole Effluent Toxicity Tests. Based on data submitted by the permittee it was decided that sampling for all of the standard sanitary landfill potential contaminants of concern was not necessary. Instead in the event of a discharge from the no discharge lagoon, it was decided that a multiple dilution WET test would be more appropriate. The data submitted does not suggest anything toxic in the leachate, ANY WET test failure will require a toxicity identification evaluation (TIE) or toxicity reduction evaluation (TRE) as documented in special condition number 11(a)(6) on page 8 of the permit. Upon discharge of the lagoon the permittee shall also be require to submit within 60 days an explanation of why the lagoon discharged, and what is to be done in preventing future occurrences. To ensure that land applied lechate does not run off site, the system shall be designed, and operated so that the land application system can only be started manually by personnel on-site, and that the system has an automatic shut off that prevents over application. In the future the Department may require soil testing of the land application area to verify that there has been no significant accumulation of wastes in the soil.

Part II – Operator Certification Requirements

As per [10 CSR 20-9.010(2)(A)], requirements for operation by certified personnel shall apply to all wastewater treatment systems, if applicable, as listed below:

Check boxes below that are applicable to the facility;

- Population Equivalent greater than two hundred (200):
- Fifty (50) or more service connections:

- Owned or operated by or for:
 - Municipalities
 - Public Sewer District:
 - County
 - Public Water Supply Districts:
 - Private sewer company regulated by the Public Service Commission:
 - State or Federal agencies:

Not Applicable ; This facility is not required to have a certified operator.

Part III – Receiving Stream Information

APPLICABLE DESIGNATIONS OF WATERS OF THE STATE:

As per Missouri’s Effluent Regulations [10 CSR 20-7.015], the waters of the state are divided into the below listed seven (7) categories. Each category lists effluent limitations for specific parameters, which are presented in each outfall’s Effluent Limitation Table and further discussed in the Derivation & Discussion of Limits section.

- Missouri or Mississippi River [10 CSR 20-7.015(2)]:
- Lake or Reservoir [10 CSR 20-7.015(3)]:
- Losing [10 CSR 20-7.015(4)]:
- Metropolitan No-Discharge [10 CSR 20-7.015(5)]:
- Special Stream [10 CSR 20-7.015(6)]:
- Subsurface Water [10 CSR 20-7.015(7)]:
- All Other Waters [10 CSR 20-7.015(8)]:

10 CSR 20-7.031 Missouri Water Quality Standards, the Department defines the Clean Water Commission water quality objectives in terms of "water uses to be maintained and the criteria to protect those uses." The receiving stream and/or 1st classified receiving stream’s beneficial water uses to be maintained are located in the Receiving Stream Table located below in accordance with [10 CSR 20-7.031(3)].

RECEIVING STREAM(S) TABLE:

WATERBODY NAME	CLASS	WBID	DESIGNATED USES*	8-DIGIT HUC	EDU**
Unnamed Tributary to the Meramec River	U	N/A	Losing, General Criteria	07140102	Ozark/ Meramec
Meramec River***	P	2183	AQL, LWW, WBC(A), SCR, DWS, IND		

* Irrigation (IRR), Livestock & Wildlife Watering (LWW), Protection of Warm Water Aquatic Life and Human Health-Fish Consumption (AQL), Cool Water Fishery(CLF), Cold Water Fishery (CDF), Whole Body Contact Recreation (WBC), Secondary Contact Recreation (SCR), Drinking Water Supply (DWS), Industrial (IND), Groundwater (GRW).

** Ecological Drainage Unit

*** Whole Body Contact Recreation Use Exists, therefore no UAA conducted.

RECEIVING STREAM(S) LOW-FLOW VALUES TABLE:

RECEIVING STREAM (U, C, P)	LOW-FLOW VALUES (CFS)		
	1Q10	7Q10	30Q10
Unnamed Tributary to the Meramec River (U)	0.0	0.0	0.0

Mixing Zone: Not Allowed [10 CSR 20-7.031(4)(A)4.B.(I)(a)].

Zone of Initial Dilution: Not Allowed [10 CSR 20-7.031(4)(A)4.B.(I)(b)].

RECEIVING STREAM MONITORING REQUIREMENTS:

No receiving water monitoring requirements recommended at this time.

Part IV – Rationale and Derivation of Effluent Limitations & Permit Conditions

ALTERNATIVE EVALUATIONS FOR NEW FACILITIES:

As per [10 CSR 20-7.015(4)(A)], discharges to losing streams shall be permitted only after other alternatives including land application, discharges to a gaining stream and connection to a regional wastewater treatment facility have been evaluated and determined to be unacceptable for environmental and/or economic reasons.

Applicable ;

This facility discharges to a Losing Stream, as defined by [10 CSR 20-2.010(36)] & [10 CSR 20-7.031(1)(N)], and has submitted an application to construct and operate a no discharge system.

ANTI-BACKSLIDING:

A provision in the Federal Regulations [CWA §303(d)(4); CWA §402(c); 40 CFR Part 122.44(I)] that requires a reissued permit to be as stringent as the previous permit with some exceptions.

- New facility, backsliding does not apply.

ANTIDEGRADATION:

In accordance with Missouri’s Water Quality Standard [10 CSR 20-7.031(2)], the Department is to document by means of Antidegradation Review that the use of a water body’s available assimilative capacity is justified. Degradation is justified by documenting the socio-economic importance of a discharging activity after determining the necessity of the discharge.

- No discharge system, therefore no degradation proposed

BIO-SOLIDS, SLUDGE, & SEWAGE SLUDGE:

Bio-solids are solid materials resulting from wastewater treatment that meet federal and state criteria for beneficial uses (i.e. fertilizer). Sludge is any solid, semi-solid, or liquid waste generated from a municipal, commercial, or industrial wastewater treatment plant, water supply treatment plant, or air pollution control facility or any other such waste having similar characteristics and effect. Sewage sludge is solids, semi-solids, or liquid residue generated during the treatment of domestic sewage in a treatment works; including but not limited to, domestic septage; scum or solids removed in primary, secondary, or advanced wastewater treatment process; and a material derived from sewage sludge. Sewage sludge does not include ash generated during the firing of sewage sludge in a sewage sludge incinerator or grit and screening generated during preliminary treatment of domestic sewage in a treatment works.

Not Applicable ;

This condition is not applicable to the permittee for this specific facility.

COMPLIANCE AND ENFORCEMENT:

Enforcement is the action taken by the Water Protection Program (WPP) to bring an entity into compliance with the Missouri Clean Water Law, its implementing regulations, and/or any terms and conditions of an operating permit. The primary purpose of the enforcement activity in the WPP is to resolve violations and return the entity to compliance.

Not Applicable ;

The permittee/facility is not currently under Water Protection Program enforcement action.

PRETREATMENT PROGRAM:

The reduction of the amount of pollutants, the elimination of pollutants, or the alteration of the nature of pollutant properties in wastewater prior to or in lieu of discharging or otherwise introducing such pollutants into a Publicly Owned Treatment Works [40 CFR Part 403.3(q)].

Not Applicable ;

At this time, the permittee is not required to implement and enforce a Pretreatment Program.

REASONABLE POTENTIAL ANALYSIS (RPA):

Limitations must control all pollutants or pollutant parameters that are or may be discharged at a level which will cause, have reasonable potential to cause, or contribute to an excursion above the Missouri Water Quality Standards.

Not Applicable ;

A RPA was not conducted for this facility.

REMOVAL EFFICIENCY:

Removal efficiency is a method by which the Federal Regulations define Secondary Treatment and Equivalent to Secondary Treatment, which applies to Biochemical Oxygen Demand 5-day (BOD₅) and Total Suspended Solids (TSS) for Publicly Owned Treatment Works (POTWs). Please see the United States Environmental Protection Agency's (EPA) website for interpretation of percent removal requirements for National Pollutant Discharge Elimination System Permit Application Requirements for Publicly Owned Treatment Works and Other Treatment Works Treating Domestic Sewage @ www.epa.gov/fedrgstr/EPA-WATER/1999/August/Day-04/w18866.htm

Not Applicable ;

This wastewater treatment facility is a no discharge facility. Influent monitoring is not being required to determine percent removal.

SANITARY SEWER OVERFLOWS (SSOs), AND INFLOW & INFILTRATION (I&I):

Collection systems are a critical element in the successful performance of the wastewater treatment process. Under certain conditions, poorly designed, built, managed, operated, and/or maintained systems can pose risks to public health, the environment, or both. Causes of SSOs include, but are not limited to, the following: high levels of I&I during wet weather; blockages; structural, mechanical, or electrical failures; collapsed or broken sewer pipes; insufficient conveyance capacity; and vandalism. Effective and continuous management, operation, and maintenance, as well as ensuring adequate capacity and rehabilitation when necessary are critical to maintaining collection system capacity and performance while extending the life of the system.

Not Applicable ;

This facility is not required to develop or implement a program for maintenance and repair of the collection system; however, it is a violation of Missouri State Environmental Laws and Regulations to allow untreated wastewater to discharge to waters of the state.

SCHEDULE OF COMPLIANCE (SOC):

A schedule of remedial measures included in a permit, including an enforceable sequence of interim requirements (actions, operations, or milestone events) leading to compliance with the Missouri Clean Water Law, its implementing regulations, and/or the terms and conditions of an operating permit.

Not Applicable ;

This permit does not contain a SOC.

STORM WATER POLLUTION PREVENTION PLAN (SWPPP):

A plan to schedule activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the state. The plan may include, but is not limited to, treatment requirements, operating procedures, and practices to control facility site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

Applicable ;

A SWPPP shall be developed and implemented for each site and shall incorporate required practices identified by the Department with jurisdiction, incorporate erosion control practices specific to site conditions, and provide for maintenance and adherence to the plan.

VARIANCE:

As per the Missouri Clean Water Law § 644.061.4, variances shall be granted for such period of time and under such terms and conditions as shall be specified by the commission in its order. The variance may be extended by affirmative action of the commission. In no event shall the variance be granted for a period of time greater than is reasonably necessary for complying with the Missouri Clean Water Law §§644.006 to 644.141 or any standard, rule or regulation promulgated pursuant to Missouri Clean Water Law §§644.006 to 644.141.

Not Applicable ;

This operating permit is not drafted under premises of a petition for variance.

WASTELOAD ALLOCATIONS (WLA) FOR LIMITS:

As per [10 CSR 20-2.010(78)], the amount of pollutant each discharger is allowed by the Department to release into a given stream after the Department has determined to total amount of pollutant that may be discharged into that stream without endangering its water quality.

$$C = \frac{(C_s \times Q_s) + (C_e \times Q_e)}{(Q_e + Q_s)} \quad (\text{EPA/505/2-90-001, Section 4.5.5})$$

Where C = downstream concentration
Cs = upstream concentration
Qs = upstream flow
Ce = effluent concentration
Qe = effluent flow

Chronic wasteload allocations were determined using applicable chronic water quality criteria (CCC: criteria continuous concentration) and stream volume of flow at the edge of the mixing zone (MZ). Acute wasteload allocations were determined using applicable water quality criteria (CMC: criteria maximum concentration) and stream volume of flow at the edge of the zone of initial dilution (ZID).

Water quality based maximum daily and average monthly effluent limitations were calculated using methods and procedures outlined in USEPA's "Technical Support Document For Water Quality-based Toxics Control" (EPA/505/2-90-001).

Not Applicable ;

Wasteload allocations were not calculated.

WLA MODELING:

Not Applicable ;

A WLA study was either not submitted or determined not applicable by Department staff.

WHOLE EFFLUENT TOXICITY (WET) TEST:

A WET test is a quantifiable method of determining if a discharge from a facility may be causing toxicity to aquatic life by itself, in combination with or through synergistic responses when mixed with receiving stream water.

Applicable ;

Under the federal Clean Water Act (CWA) §101(a)(3), requiring WET testing is reasonably appropriate for site-specific Missouri State Operating Permits for discharges to waters of the state issued under the National Pollutant Discharge Elimination System (NPDES). WET testing is also required by 40 CFR 122.44(d)(1). WET testing ensures that the provisions in the 10 CSR 20-6.010(8)(A)7. and the Water Quality Standards 10 CSR 20-7.031(3)(D),(F),(G),(I)2.A & B are being met. Under [10 CSR 20-6.010(8)(A)4], the Department may require other terms and conditions that it deems necessary to assure compliance with the Clean Water Act and related regulations of the Missouri Clean Water Commission. In addition the following MCWL apply: §§644.051.3 requires the Department to set permit conditions that comply with the MCWL and CWA; 644.051.4 specifically references toxicity as an item we must consider in writing permits (along with water quality-based effluent limits, pretreatment, etc...); and 644.051.5 is the basic authority to require testing conditions. WET test will be required by all facilities meeting the following criteria:

- Facility is a designated Major.
- Facility continuously or routinely exceeds its design flow.
- Facility (industrial) that alters its production process throughout the year.
- Facility handles large quantities of toxic substances, or substances that are toxic in large amounts.
- Facility has Water Quality-based Effluent Limitations for toxic substances (other than NH₃)
- Facility is a municipality or domestic discharger with a Design Flow ≥ 22,500 gpd.
- Other – Facility is designed as a no discharge system and the holding lagoon stores lechate from a pre-subtitle D landfill.

303(d) LIST & TOTAL MAXIMUM DAILY LOAD (TMDL):

Section 303(d) of the federal Clean Water Act requires that each state identify waters that are not meeting water quality standards and for which adequate water pollution controls have not been required. Water quality standards protect such beneficial uses of water as whole body contact (such as swimming), maintaining fish and other aquatic life, and providing drinking water for people, livestock and wildlife. The 303(d) list helps state and federal agencies keep track of waters that are impaired but not addressed by normal water pollution control programs.

A TMDL is a calculation of the maximum amount of a given pollutant that a body of water can absorb before its water quality is affected. If a water body is determined to be impaired as listed on the 303(d) list, then a watershed management plan will be developed that shall include the TMDL calculation

Not Applicable ;

This facility does not discharge to a 303(d) listed stream.

Part V – Effluent Limits Determination

Outfall #001 – Storage Basin

EFFLUENT LIMITATIONS TABLE:

PARAMETER	UNIT	BASIS FOR LIMITS	DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MODIFIED	PREVIOUS PERMIT LIMITATIONS
FLOW	MGD	1	*		*	YES	N/A
BOD ₅	MG/L	1	*		*	YES	N/A
TSS	MG/L	1	*		*	YES	N/A
pH	SU	1	6.5-9.0		6.5-9.0	YES	N/A
LAGOON FREEBOARD	FEET	1	**		**	NO	N/A
RAINFALL	INCHES	1	**		**	NO	N/A
MONITORING FREQUENCY	Please see Minimum Sampling and Reporting Frequency Requirements in the Derivation and Discussion Section below.						

* - Discharge for reasons other than those allowed in the permit will constitute a violation. Monitoring requirement only.

** - Monitoring Only

N/A - Not applicable

Outfall #002 – Land Application

EFFLUENT LIMITATIONS TABLE:

PARAMETER	UNIT	BASIS FOR LIMITS	DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MODIFIED	PREVIOUS PERMIT LIMITATIONS
IRRIGATION PERIOD	HOURS	1	**		**	YES	N/A
VOLUME IRRIGATED	GALLONS	1	**		**	YES	N/A
APPLICATION AREA	ACRES	1	**		**	YES	N/A
APPLICATION RATE	INCHES/ACRE	1	**		**	YES	N/A
MONITORING FREQUENCY	Please see Minimum Sampling and Reporting Frequency Requirements in the Derivation and Discussion Section below.						

** - Monitoring Only

Basis for Limitations Codes:

- | | |
|--|------------------------------------|
| 1. State or Federal Regulation/Law | 7. Antidegradation Policy |
| 2. Water Quality Standard (includes RPA) | 8. Water Quality Model |
| 3. Water Quality Based Effluent Limits | 9. Best Professional Judgment |
| 4. Lagoon Policy | 10. TMDL or Permit in lieu of TMDL |
| 5. Ammonia Policy | 11. WET Test Policy |
| 6. Dissolved Oxygen Policy | |

DERIVATION AND DISCUSSION OF LIMITS:

OUTFALL #001

All parameters for this outfall are monitoring requirements only with the exception of pH.

Minimum Sampling and Reporting Frequency Requirements #001: Permittee shall notify the St. Louis Regional Office immediately when a discharge begins and when the discharge ceases.

OUTFALL #002

All parameters for this outfall are monitoring requirements only

MINIMUM SAMPLING AND REPORTING FREQUENCY REQUIREMENTS

OUTFALL #001

PARAMETER	SAMPLING FREQUENCY	REPORTING FREQUENCY
LAGOON FREEBOARD (FEET)	ONCE/DAY	ONCE/YEAR
RAINFALL (INCHES)	ONCE/DAY	ONCE/YEAR

OUTFALL #002

PARAMETER	SAMPLING FREQUENCY	REPORTING FREQUENCY
IRRIGATION PERIOD (HOURS)	ONCE/DAY	ONCE/YEAR
VOLUME IRRIGATED (GALLONS)	ONCE/DAY	ONCE/YEAR
APPLICATION AREA (ACRES)	ONCE/DAY	ONCE/YEAR
APPLICATION RATE (INCHES/ACRE)	ONCE/DAY	ONCE/YEAR

Part VI – Finding of Affordability

Pursuant to Section 644.145, RSMo., the Department is required to determine whether a permit or decision is affordable and makes a finding of affordability for certain permitting and enforcement decisions. This requirement applies to discharges from combined or separate sanitary sewer systems or publically-owned treatment works.

Not Applicable;

The Department is not required to determine findings of affordability because the facility is not a **combined or separate sanitary sewer system for a publically-owned treatment works**.

Part VII – Administrative Requirements

On the basis of preliminary staff review and the application of applicable standards and regulations, the Department, as administrative agent for the Missouri Clean Water Commission, proposes to issue a permit(s) subject to certain effluent limitations, schedules, and special conditions contained herein and within the operating permit. The proposed determinations are tentative pending public comment.

PERMIT SYNCHRONIZATION:

The Missouri Department of Natural Resources is transitioning from the traditional methods with which Missouri's water resources have been managed to a Watershed Based Management (WBM) approach. The WBM approach will manage watersheds on the eight-digit Hydrological Unit Code (HUC8) scale. As permitting and permit synchronization is a key aspect of successful implementation of a Watershed Management Plan (WMP), the same HUC8 groups that will move through the WBM cycle will have their permit expirations and issuances synchronized in the same fiscal year. The typical five-year term of the permit issuances aligns with the proposed five-year WBM cycle and the two processes will be intimately tied together.

The immediate goals of the permit synchronization include the following:

- The administrative and technical streamlining of Water Protection Program and Regional Office activities such as permitting, inspections, and water quality monitoring.
- Providing the basis for future watershed permitting.
- Beginning to further examine Missouri's water resources on a watershed basis.

This permit will expire on 2nd quarter of 2018 in order to meet the permit synchronization goals.

Part VIII – Administrative Requirements

On the basis of preliminary staff review and the application of applicable standards and regulations, the Department, as administrative agent for the Missouri Clean Water Commission, proposes to issue a permit(s) subject to certain effluent limitations, schedules, and special conditions contained herein and within the operating permit. The proposed determinations are tentative pending public comment.

PUBLIC NOTICE:

As per the Missouri Clean Water Law, the Missouri Clean Water Commission, and the federal Clean Water Act, persons wishing to comment on Missouri State Operating Permits are directed to do so by a Department approved Public Notice coversheet. This Public Notice coversheet is attached to a Missouri State Operating Permit during the Public Notice period.

- **The Public Notice period for this operating permit is tentatively scheduled to begin May, 2013.**

DATE OF FACT SHEET: **AUGUST 5, 2010**

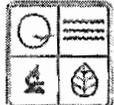
DRAFTED BY;

Thabit. H. Hamoud, P.E, EE III
Missouri Department of Natural Resources
Water Protection Section
7545 S. Lindbergh, Suite 210, St. Louis, Missouri 63125
(314) 416-2453
thabit.hamoud@dnr.mo.gov

No Fee due at this time

FEB - 7

AP3680



MISSOURI DEPARTMENT OF NATURAL RESOURCES
WATER PROTECTION PROGRAM, WATER POLLUTION CONTROL BRANCH
FORM A - APPLICATION FOR CONSTRUCTION OR OPERATING PERMIT
UNDER MISSOURI CLEAN WATER LAW

FOR AGENCY USE ONLY	
CHECK NUMBER	
DATE RECEIVED	FEE SUBMITTED
4/5/13	0 SR

Note ► PLEASE READ THE ACCOMPANYING INSTRUCTIONS BEFORE COMPLETING THIS FORM.

1. This application is for:

An operating permit and antidegradation review public notice

A construction permit following an appropriate operating permit and antidegradation review public notice

A construction permit and concurrent operating permit and antidegradation review public notice

A construction permit (submitted before Aug. 30, 2008 or antidegradation review is not required)

An operating permit for a new or unpermitted facility Construction Permit # 0000801

An operating permit renewal: permit # MO- _____ Expiration Date 9-26-2011

An operating permit modification: permit # MO- _____ Reason: _____

MO-0136450

1.1 Is the appropriate fee included with the application? (See instructions for appropriate fee) YES NO

2. FACILITY

NAME		TELEPHONE WITH AREA CODE	
JEFFCO LANDFILL		NA	
		FAX	NA
ADDRESS (PHYSICAL)	CITY	STATE	ZIP CODE
1650 OLD MISSOURI STATE HIGHWAY 21	ARNOLD	MO	63010

3. OWNER

NAME		E-MAIL ADDRESS	TELEPHONE WITH AREA CODE
BFI SERVICES GROUP		bpower@ republicservices.com	618-656-6912
		FAX	618-656-6926
ADDRESS (MAILING)	CITY	STATE	ZIP CODE
4600 CAHOKIA CREEK ROAD	ROXANA	IL	62084

3.1 Request review of draft permit prior to public notice? YES NO

4. CONTINUING AUTHORITY

NAME		TELEPHONE WITH AREA CODE	
REPUBLIC SERVICES, INC.		314-739-5099	
		FAX	314-739-2588
ADDRESS (MAILING)	CITY	STATE	ZIP CODE
12976 ST. CHARLES ROCK	BRIDGETON	MO	63044

5. OPERATOR

NAME		CERTIFICATE NUMBER	TELEPHONE WITH AREA CODE
BFI SERVICES GROUP		NA	618-656-6912
		FAX	618-656-6926
ADDRESS (MAILING)	CITY	STATE	ZIP CODE
4600 CAHOKIA CREEK ROAD	ROXANA	IL	62084

6. FACILITY CONTACT

NAME		TITLE	TELEPHONE WITH AREA CODE
MR. BRIAN POWER		ENVIRONMENTAL MANAGER	618-656-6912
		FAX	618-656-6926

7. ADDITIONAL FACILITY INFORMATION

7.1 Legal Description of Outfalls. (Attach additional sheets if necessary.)

001 _____ 1/4 _____ 1/4 _____ Sec _____ T _____ R _____ County _____
 UTM Coordinates Easting (X): _____ Northing (Y): _____
For Universal Transverse Mercator (UTM), Zone 15 North referenced to North American Datum 1983 (NAD83)

002 _____ 1/4 _____ 1/4 _____ Sec _____ T _____ R _____ County _____
 UTM Coordinates Easting (X): _____ Northing (Y): _____

003 _____ 1/4 _____ 1/4 _____ Sec _____ T _____ R _____ County _____
 UTM Coordinates Easting (X): _____ Northing (Y): _____

004 _____ 1/4 _____ 1/4 _____ Sec _____ T _____ R _____ County _____
 UTM Coordinates Easting (X): _____ Northing (Y): _____

7.2 Primary Standard Industrial Classification (SIC) and Facility North American Industrial Classification System (NAICS) Codes.

001 - SIC 4953 _____ and NAICS 562212 _____ 002 - SIC _____ and NAICS _____
 003 - SIC _____ and NAICS _____ 004 - SIC _____ and NAICS _____

8. ADDITIONAL FORMS AND MAPS NECESSARY TO COMPLETE THIS APPLICATION (Complete all forms that are applicable.)			
A.	Is your facility a manufacturing, commercial, mining or silviculture waste treatment facility? If yes, complete Form C (unless storm water only, then complete U.S. Environmental Protection Agency Form 2F per Item C below).	YES <input checked="" type="checkbox"/>	NO <input type="checkbox"/>
B.	Is your facility considered a "Primary Industry" under EPA guidelines: If yes, complete Forms C and D.	YES <input checked="" type="checkbox"/>	NO <input type="checkbox"/>
C.	Is application for storm water discharges only? If yes, complete EPA Form 2F.	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>
D.	Attach a map showing all outfalls and the receiving stream at 1" = 2,000' scale.		
E.	Is wastewater land applied? If yes, complete Form I.	YES <input checked="" type="checkbox"/>	NO <input type="checkbox"/>
F.	Is sludge, biosolids, ash or residuals generated, treated, stored or land applied? If yes, complete Form R.	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>
9. DOWNSTREAM LANDOWNER(S) Attach additional sheets as necessary. See Instructions. (PLEASE SHOW LOCATION ON MAP. SEE 8.D ABOVE).			
NAME NA - NO DISCHARGE WILL OCCUR.			
ADDRESS		CITY	STATE ZIP CODE
10. I certify that I am familiar with the information contained in the application, that to the best of my knowledge and belief such information is true, complete and accurate, and if granted this permit, I agree to abide by the Missouri Clean Water Law and all rules, regulations, orders and decisions, subject to any legitimate appeal available to applicant under the Missouri Clean Water Law to the Missouri Clean Water Commission.			
NAME AND OFFICIAL TITLE (TYPE OR PRINT) TIM TROST, AREA PRESIDENT		TELEPHONE WITH AREA CODE 314-739-5099	
SIGNATURE 		DATE SIGNED 01-25-11	

MO 780-147B (01-09)

BEFORE MAILING, PLEASE ENSURE ALL SECTIONS ARE COMPLETED AND ADDITIONAL FORMS, IF APPLICABLE, ARE INCLUDED.

Submittal of an incomplete application may result in the application being returned.

HAVE YOU INCLUDED:

- Appropriate Fees?
- Map at 1" = 2000' scale?
- Signature?
- Form C, if applicable?
- Form D, if applicable?
- Form 2F, if applicable?
- Form I (Irrigation), if applicable?
- Form R (Sludge), if applicable?



MISSOURI DEPARTMENT OF NATURAL RESOURCES
 WATER PROTECTION PROGRAM, WATER POLLUTION BRANCH
 (SEE MAP FOR APPROPRIATE REGIONAL OFFICE)
**FORM C - APPLICATION FOR DISCHARGE PERMIT - MANUFACTURING,
 COMMERCIAL, MINING AND SILVICULTURE OPERATIONS**

FOR AGENCY USE ONLY	
CHECK NO.	
DATE RECEIVED	FEE SUBMITTED

NOTE: DO NOT ATTEMPT TO COMPLETE THIS FORM BEFORE READING THE ACCOMPANYING INSTRUCTIONS

1.00 NAME OF FACILITY
 Jeffco Landfill

1.10 THIS FACILITY IS NOW IN OPERATION UNDER MISSOURI OPERATING PERMIT NUMBER
 NA

1.20 THIS IS A NEW FACILITY AND WAS CONSTRUCTED UNDER MISSOURI CONSTRUCTION PERMIT NUMBER (COMPLETE ONLY IF THIS FACILITY DOES NOT HAVE AN OPERATING PERMIT).
 Currently applying for operating permit. See Form A.

2.00 LIST THE STANDARD INDUSTRIAL CLASSIFICATION (SIC) CODES APPLICABLE TO YOUR FACILITY (FOUR DIGIT CODE)

A. FIRST 4953 B. SECOND _____
 C. THIRD _____ D. FOURTH _____

2.10 FOR EACH OUTFALL GIVE THE LEGAL DESCRIPTION.
 OUTFALL NUMBER (LIST) _____ ¼ _____ ¼ SEC _____ T _____ R _____ County _____
 This will be a no-discharge facility; therefore, there will be no outfalls.

2.20 FOR EACH OUTFALL LIST THE NAME OF THE RECEIVING WATER.

OUTFALL NUMBER (LIST)	RECEIVING WATER
NA	NA

2.30 BRIEFLY DESCRIBE THE NATURE OF YOUR BUSINESS:

Jeffco Landfill is a closed, non-permitted, pre-subtitle D solid waste landfill. The site currently hosts a closed-loop leachate irrigation system for phytoirrigation. The applicant constructed a leachate retention pond to store excess leachate for distribution during dry months through the phytoirrigation system. It will remain a closed-loop (no discharge) system.

For additional detailed information, see application cover letter and/or the design documents (Plates 1 - 5).

2.40 CONTINUED

C. EXCEPT FOR STORM RUNOFF, LEAKS, OR SPILLS, ARE ANY OF THE DISCHARGES DESCRIBED IN ITEMS A OR B INTERMITTENT OR SEASONAL?
 YES (COMPLETE THE FOLLOWING TABLE) NO (GO TO SECTION 2.50) NA - This will be a no-discharge facility.

1. OUTFALL NUMBER (list)	2. OPERATION(S) CONTRIBUTING FLOW (list)	3. FREQUENCY		4. FLOW				C. DURATION (in days)
		A. DAYS PER WEEK (specify average)	B. MONTHS PER YEAR (specify average)	A. FLOW RATE (in mgd)		B. TOTAL VOLUME (specify with units)		
				1. LONG TERM AVERAGE	2. MAXIMUM DAILY	4. LONG TERM DAILY	3. MAXIMUM AVERAGE	

2.50 MAXIMUM PRODUCTION

A. DOES AN EFFLUENT GUIDELINE LIMITATION PROMULGATED BY EPA UNDER SECTION 304 OF THE CLEAN WATER ACT APPLY TO YOUR FACILITY?
 YES (COMPLETE B.) NO (GO TO SECTION 2.60)

B. ARE THE LIMITATIONS IN THE APPLICABLE EFFLUENT GUIDELINE EXPRESSED IN TERMS OF PRODUCTION (OR OTHER MEASURE OF OPERATION)?
 YES (COMPLETE C.) NO (GO TO SECTION 2.60) NA

C. IF YOU ANSWERED "YES" TO B. LIST THE QUANTITY THAT REPRESENTS AN ACTUAL MEASUREMENT OF YOUR MAXIMUM LEVEL OF PRODUCTION, EXPRESSED IN THE TERMS AND UNITS USED IN THE APPLICABLE EFFLUENT GUIDELINE AND INDICATE THE AFFECTED OUTFALLS. NA

1. MAXIMUM QUANTITY			2. AFFECTED OUTFALLS (list outfall numbers)
A. QUANTITY PER DAY	B. UNITS OF MEASURE	C. OPERATION, PRODUCT, MATERIAL, ETC. (specify)	

2.60 IMPROVEMENTS

A. ARE YOU NOW REQUIRED BY ANY FEDERAL, STATE OR LOCAL AUTHORITY TO MEET ANY IMPLEMENTATION SCHEDULE FOR THE CONSTRUCTION, UPGRADING OR OPERATION OF WASTEWATER TREATMENT EQUIPMENT OR PRACTICES OR ANY OTHER ENVIRONMENTAL PROGRAMS THAT MAY AFFECT THE DISCHARGES DESCRIBED IN THIS APPLICATION? THIS INCLUDES, BUT IS NOT LIMITED TO, PERMIT CONDITIONS, ADMINISTRATIVE OR ENFORCEMENT ORDERS, ENFORCEMENT COMPLIANCE SCHEDULE LETTERS, STIPULATIONS, COURT ORDERS AND GRANT OR LOAN CONDITIONS.
 YES (COMPLETE THE FOLLOWING TABLE) NO (GO TO 3.00)

1. IDENTIFICATION OF CONDITION, AGREEMENT, ETC.	2. AFFECTED OUTFALLS		3. BRIEF DESCRIPTION OF PROJECT	4. FINAL COMPLIANCE DATE	
				A. REQUIRED	B. PROJECTED

B. OPTIONAL: YOU MAY ATTACH ADDITIONAL SHEETS DESCRIBING ANY ADDITIONAL WATER POLLUTION CONTROL PROGRAMS (OR OTHER ENVIRONMENTAL PROJECTS WHICH MAY AFFECT YOUR DISCHARGES) YOU NOW HAVE UNDER WAY OR WHICH YOU PLAN. INDICATE WHETHER EACH PROGRAM IS NOW UNDER WAY OR PLANNED, AND INDICATE YOUR ACTUAL OR PLANNED SCHEDULES FOR CONSTRUCTION.

MARK "X" IF DESCRIPTION OF ADDITIONAL CONTROL PROGRAMS IS ATTACHED.

3.10 BIOLOGICAL TOXICITY TESTING DATA

DO YOU HAVE ANY KNOWLEDGE OR REASON TO BELIEVE THAT ANY BIOLOGICAL TEST FOR ACUTE OR CHRONIC TOXICITY HAS BEEN MADE ON ANY OF YOUR DISCHARGES OR ON A RECEIVING WATER IN RELATION TO YOUR DISCHARGE WITHIN THE LAST THREE YEARS? NA - This will be a no-discharge facility.

YES (IDENTIFY THE TEST(S) AND DESCRIBE THEIR PURPOSES BELOW.)

NO (GO TO 3.20)

3.20 CONTRACT ANALYSIS INFORMATION

WERE ANY OF THE ANALYSES REPORTED PERFORMED BY A CONTRACT LABORATORY OR CONSULTING FIRM? NA - This will be a no-discharge facility.

YES (LIST THE NAME, ADDRESS AND TELEPHONE NUMBER OF AND POLLUTANTS ANALYZED BY EACH SUCH LABORATORY OR FIRM BELOW.)

NO (GO TO 3.30)

A. NAME	B. ADDRESS	C. TELEPHONE (area code and number)	D. POLLUTANTS ANALYZED (list)

3.30 CERTIFICATION

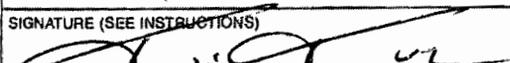
I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED IN THIS APPLICATION AND ALL ATTACHMENTS AND THAT, BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION, I BELIEVE THAT THE INFORMATION IS TRUE, ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT.

NAME AND OFFICIAL TITLE (TYPE OR PRINT)
TIM TROST, AREA PRESIDENT

TELEPHONE NUMBER (AREA CODE AND NUMBER)
314-739-5099

SIGNATURE (SEE INSTRUCTIONS)

DATE SIGNED



01-25-11

PLEASE PRINT OR TYPE. You may report some or all of this information on separate sheets
(use the same format) instead of completing these pages.
 SEE INSTRUCTIONS.

FORM C
 TABLE 1 FOR 3.00 ITEM A AND B

INTAKE AND EFFLUENT CHARACTERISTICS (continued from page 3 of Form 2-C)

OUTFALL NO.

PART A - You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

1. POLLUTANT	2. EFFLUENT				3. UNITS (Specify if Blank)		4. INTAKE (optional)					
	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE		C. LONG TERM AVRG. VALUE		D. NO. OF ANAL. YSES	A. CONCENTRATION	B. MASS	A. LONG TERM AVRG. VALUE		B. NO. OF ANAL. YSES
	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
A. Biochemical Oxygen Demand (BOD)												
B. Chemical Oxygen Demand (COD)												
C. Total Organic Carbon (TOC)												
D. Total Suspended Solids (TSS)												
E. Ammonia (as N)												
F. Flow	VALUE		VALUE		VALUE					VALUE		
G. Temperature (winter)	VALUE		VALUE		VALUE			°C		VALUE		
H. Temperature (summer)	VALUE		VALUE		VALUE			°C		VALUE		
I. pH	MINIMUM	MAXIMUM	MINIMUM	MAXIMUM				STANDARD UNITS				

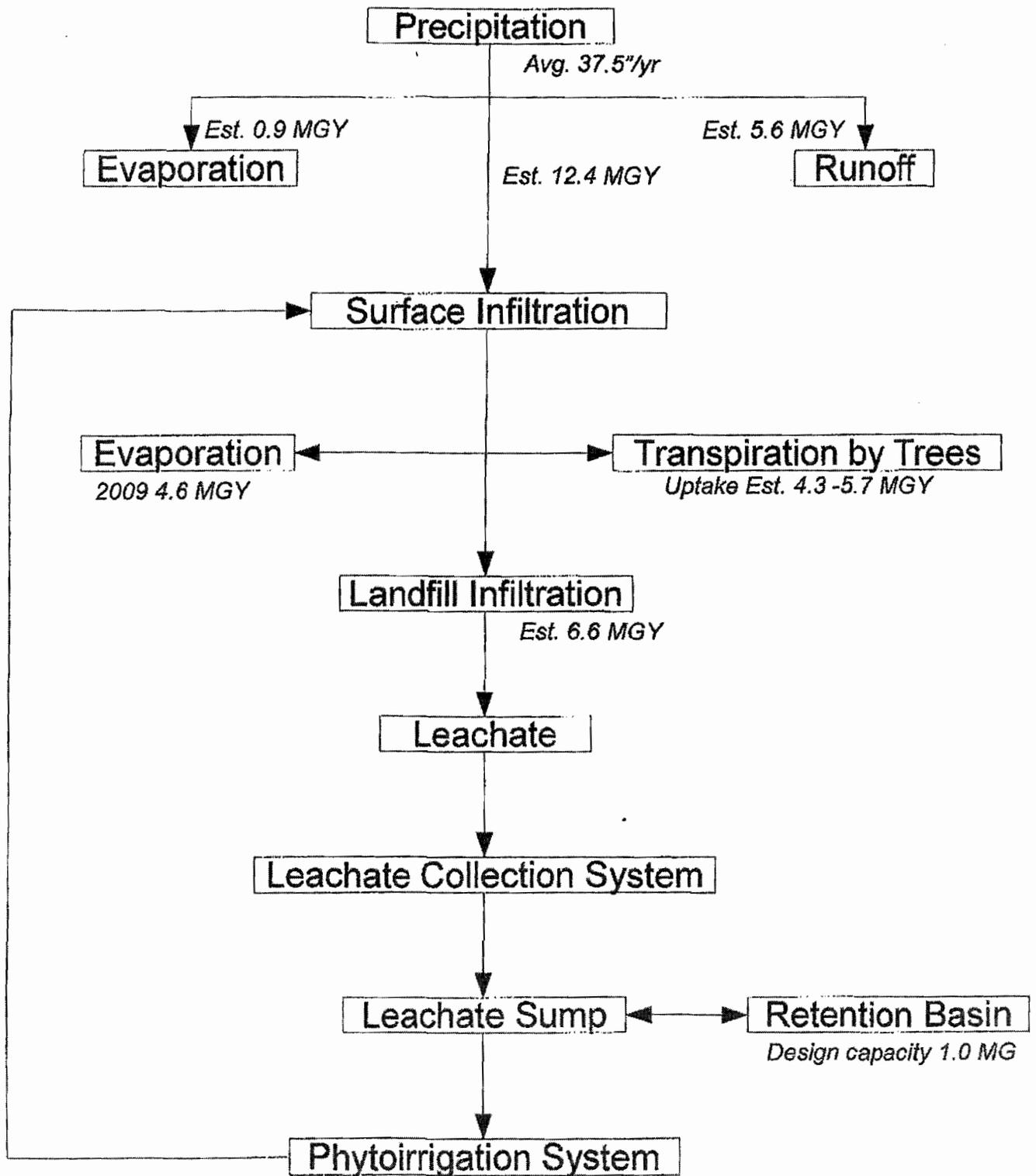
PART B - Mark 'X' in column 2-a for each pollutant you know or have reason to believe is present. Mark 'X' in column 2-b for each pollutant you believe to be absent. If you mark column 2-a for any pollutant, you must provide the results of at least one analysis for that pollutant. Complete one table for each outfall. See the instructions for additional details and requirements.

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK 'X'		3. EFFLUENT				4. UNITS		5. INTAKE (optional)					
	A. BE-LEVED SENT	B. BE-LEVED SENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE		C. LONG TERM AVRG. VALUE		D. NO. OF ANAL. YSES	A. CONCENTRATION	B. MASS	A. LONG TERM AVRG. VALUE		B. NO. OF ANAL. YSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
A. Bromide (24959-67-9)														
B. Chlorine Total Residual														
C. Color														
D. Faecal Coliform														
E. Fluoride (16994-48-8)														
F. Nitrate-Nitrite (as N)														

CONTINUED FROM FRONT NA - This will be a no-discharge facility.

1. POLLUTANT AND GAS NUMBER <i>(if available)</i>	2. MARK "X"		3. EFFLUENT				4. UNITS				5. INTAKE <i>(if available)</i>			
	A. SEC. LEVIED PRE. SENT	B. SEC. LEVIED AB. SENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE <i>(if available)</i>		C. LONG TERM AVRG. VALUE <i>(if available)</i>		D. NO. OF ANAL. YRS	A. CONCEN- TRATION	B. MASS	A. LONG TERM AVRG. VALUE		B. NO. OF ANAL. YRS
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
G. Nitrogen Total Organic (as N)														
H. Oil and Grease														
I. Phosphorus (as P) Total (7723-14-0)														
J. RADIOACTIVITY														
(1) Alpha Total														
(2) Beta Total														
(3) Radium Total														
(4) Radium 226 Total														
K. Sulfate (as SO ₄) (14808-79-8)														
L. Sulfide (as S)														
M. Sulfite (as SO ₃) (14265-45-3)														
N. Surfactants														
O. Aluminum Total (7429-90-5)														
P. Barium Total (7440-39-3)														
Q. Boron Total (7440-42-8)														
R. Cobalt Total (7440-48-4)														
S. Iron total (7439-89-6)														
T. Magnesium Total (7439-95-4)														
U. Molybdenum Total (7439-98-7)														
V. Manganese Total (7439-96-5)														
W. Tin Total (7440-31-5)														
X. Titanium Total (7440-32-6)														

ATTACHMENT TO FORM C





MISSOURI DEPARTMENT OF NATURAL RESOURCES
 WATER PROTECTION PROGRAM, WATER POLLUTION BRANCH
 (SEE MAP FOR APPROPRIATE REGIONAL OFFICE)
**FORM D – APPLICATION FOR DISCHARGE PERMIT –
 PRIMARY INDUSTRIES**

FOR AGENCY USE ONLY

CHECK NO.

DATE RECEIVED

FEE SUBMITTED

NOTE: DO NOT ATTEMPT TO COMPLETE THIS FORM BEFORE READING THE ACCOMPANYING INSTRUCTIONS

1.00 NAME OF FACILITY
 JEFFCO LANDFILL

1.10 THIS FACILITY IS NOW IN OPERATION UNDER MISSOURI OPERATING PERMIT NUMBER
MO - Currently applying for operating permit; see Form A.

1.20 THIS IS A NEW FACILITY AND WAS CONSTRUCTED UNDER MISSOURI CONSTRUCTION PERMIT NUMBER (COMPLETE ONLY IF THIS FACILITY DOES NOT HAVE AN OPERATING PERMIT).
 CURRENTLY APPLYING FOR OPERATING PERMIT; SEE FORM A.

This form is to be filled out in addition to forms A and C "Application for Discharge Permit" for the Primary Industries listed below:

INDUSTRY CATEGORY

888 - 7 7011

- | | |
|-----------------------------------|---|
| Adhesives and sealants | Ore mining |
| Aluminum forming | Organic chemicals manufacturing |
| Auto and other laundries | Paint and ink formulation |
| Battery manufacturing | Pesticides |
| Coal mining | Petroleum refining |
| Coil coating | Pharmaceutical preparations |
| Copper forming | Photographic equipment and supplies |
| Electric and electronic compounds | Plastic and synthetic materials manufacturing |
| Electroplating | Plastic processing |
| Explosives manufacturing | Porcelain enameling |
| Foundries | Printing and publishing |
| Gum and wood chemicals | Pulp and paperboard mills |
| Inorganic chemicals manufacturing | Rubber processing |
| Iron and steel manufacturing | Soap and detergent manufacturing |
| Leather tanning and finishing | Steam electric power plants |
| Mechanical products manufacturing | Textile mills |
| Nonferrous metals manufacturing | Timber products processing |

**APPLICATION FOR DISCHARGE PERMIT
FORM D - PRIMARY INDUSTRIES**

TABLE II	
NPODES # (IF ASSIGNED)	OUTFALL NUMBER

1.30 If you are a primary industry and this outfall contains process wastewater, refer to Table A in the instructions to determine which of the GC/MS fractions you must test for. Mark "X" in column 2-A for all such GC/MS fractions that apply to your industry and for ALL toxic metals, cyanides, and total phenols. Mark "X" in column 2-B for each pollutant you know or have reason to believe is present. Mark "X" in column 2-C for each pollutant you believe to be absent. If you mark either columns 2-A or 2-B for any pollutant, you must provide the results of at least one analysis for that pollutant. Note that there are seven pages to this part, please review each carefully. Complete one table (all seven pages) for each outfall. See instructions for additional details and requirements. NA - This will be a no-discharge facility; therefore, no outfalls.

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"			3. EFFLUENT						D. NO. OF ANAL. YSES	4. LIMITS		5. INTAKE (optional)		
	A. TEST SWAGE OUBRED	B. BE. LEVEL PRE. SENT	C. BE. LEVEL REP. SENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE (if available)		C. LONG TERM AVRG. VALUE (if available)			A. CONCEN. TRATION	B. MASS	A. LONG TERM AVRG. VALUE		B. NO. OF ANAL. YSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
METALS, CYANIDE, AND TOTAL PHENOLS															
1M. Antimony, Total (7440-36-9)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												
2M. Arsenic, Total (7440-38-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												
3M. Beryllium, Total (7440-41-7)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												
4M. Cadmium, Total (7440-43-9)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												
5M. Chromium, Total (7440-47-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												
6M. Copper, Total (7550-50-8)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												
7M. Lead, Total (7439-97-6)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												
8M. Mercury, Total (7439-97-6)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												
9M. Nickel, Total (7440-02-0)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												
10M. Selenium, Total (7782-49-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												
11M. Silver, Total (7440-22-4)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												
12M. Thallium, Total (7440-28-0)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												
13M. Zinc, Total (7440-68-6)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												
14M. Cyanide, Total (57-12-5)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												
15M. Phenols, Total	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												
DIOXIN															
2,3,7,8 - Tetra - chlorodibenzo-P-Dioxin (1764-01-6)															
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												

DESCRIBE RESULTS

CONTINUED FROM PAGE 3 NA - This will be a no-discharge facility; therefore, no outfalls.

1. POLLUTANT AND CAS NUMBER (if available)	2. MAEK 3*			3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	A. TEST-ING RE-QUIRED	B. BE-LEVED PRE-SENT	C. BE-LEVED AB-SENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE (if available)		C. LONG TERM AVRG. VALUE (if available)		D. NO. OF ANAL-YSES	A. CONCEN-TRATION	B. MASS	A. LONG TERM AVRG. VALUE		B. NO OF ANAL-YSES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
IV. Aroclen (107-02-8)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												
2V. Acrylonitrile (107-13-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												
3V. Benzene (71-43-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												
4V. Bis (Chloromethyl) Ether (542-98-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												
5V. Bromoform (75-25-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												
6V. Carbon Tetrachloride (56-23-5)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												
7V. Chlorobenzene (108-90-7)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												
8V. Chlorodibromomethane (124-48-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												
9V. Chloroethane (75-00-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												
10V. 2-Chloroethylmethyl Ether (110-75-8)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												
11V. Chloroform (67-66-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												
12V. Dichlorodibromomethane (75-27-4)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												
13V. Dichlorodibromomethane (75-71-8)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												
14V. 1,1 - Dichloroethane (75-34-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												
15V. 1,2 - Dichloroethane (107-06-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												
16V. 1,1 - Dichloroethylene (75-35-4)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												
17V. 1,2 - Dichloropropane (78-87-5)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												
18V. 1,2 - Dichloropropylene (542-75-6)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												
19V. Ethylbenzene (100-41-4)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												
20V. Methyl Bromide (74-83-9)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												
21V. Methyl Chloride (74-87-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												

MO 782.1316 (6-04)

PAGE 3

CONTINUE ON PAGE 4

NA - This will be a no-discharge facility; therefore no outfalls.

CONTINUED FROM THE FRONT

NPDES # (IF ASSIGNED) OUTFALL NUMBER

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"			3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	A. TEST NUMBER REQUIRED	B. BE-LEVED PRE-SENT	C. BE-LEVED AB-SENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE (if available)		C. LONG TERM AVG. VALUE (if available)		D. NO. OF ANAL. TESTS	A. CONCEN-TRATION	B. MASS	A. LONG TERM AVG. VALUE		B. NO. OF ANAL. TESTS
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION - VOLATILE COMPOUNDS (continued)															
22V. Methylene Chloride (75-09-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												
23V. 1,1,2,2 - Tetra-chloroethane (79-34-5)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												
24V. Tetrachloroethylene (127-18-4)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												
25V. Toluene (108-88-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												
26V. 1,2 - Trans Dichloroethylene (156-60-5)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												
27V. 1,1,1 - Tri-chloroethane (71-55-6)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												
28V. 1,1,2 - Tri-chloroethane (79-00-5)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												
29V. Trichloro-ethylene (79-01-6)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												
30V. Trichloro-fluoromethane (75-69-4)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												
31V. Vinyl Chloride (75-01-4)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												
GC/MS FRACTION - ACID COMPOUNDS															
1A. 2 - Chlorophenol (95-57-8)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												
2A. 2,4 - Dichloro-phenol (120-83-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												
3A. 2,4 - Dimethyl-phenol (105-67-9)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												
4A. 4,5 - Dinitro - O-Cresol (534-52-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												
5A. 2,4 - Dinitro-phenol (51-28-5)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												
6A. 2-Nitrophenol (88-75-5)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												
7A. 4-Nitrophenol (100-02-7)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												
8A. P - Chloro - M-Cresol (99-50-7)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												
9A. Pentachloro-phenol (87-86-5)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												
10A. Phenol (108-95-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												
11A. 2,4,6 - Trichloro-phenol (88-06-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												

NA - This will be a no-discharge facility; therefore, no outfalls.

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"			3. EFFLUENT						4. UNITS		5. INTAKE (optional)				
	A. TESTING REQUIRED	B. 95% LIEVED ABOVE SENT	C. 95% LIEVED ABOVE SENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE (if available)		C. LONG TERM AVRG. VALUE (if available)		D. NO. OF ANAL. YSES	A. CONCENTRATION	B. MASS	A. LONG TERM AVRG. VALUE		B. NO. OF ANAL. YSES	
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS		
GCMS FRACTION - BASENEUTRAL COMPOUNDS																
1B. Acenaphthene (83-32-9)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>													
2B. Acenaphthylene (208-96-8)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>													
3B. Anthracene (120-12-7)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>													
4B. Benzidine (92-87-5)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>													
5B. Benzo (a) Anthracene (56-55-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>													
6B. Benzo (a) Pyrene (50-32-6)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>													
7B. 3,4 - Benzofluoranthene (205-99-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>													
8B. Benzo (ghi) Perylene (191-24-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>													
9B. Benzo (k) Fluoranthene (207-08-9)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>													
10B. Bis (2-Chloroethoxy) Methane (111-91-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>													
11B. Bis (2-Chloroethyl) Ether (111-44-4)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>													
12B. Bis (2-Chloroisopropyl) Ether (39638-32-9)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>													
13B. Bis (2-Ethylhexyl) Phthalate (117-81-7)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>													
14B. 4-Bromophenyl Phenyl Ether (101-55-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>													
15B. Butyl Benzyl Phthalate (85-68-7)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>													
16B. 2-Chloronaphthalene (91-58-7)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>													
17B. 4-Chlorophenyl Phenyl Ether (7005-72-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>													
18B. Chrysene (218-01-9)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>													
19B. Dibenzo (a,h) Anthracene (53-70-3)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>													
20B. 1,2 - Dichlorobenzene (95-50-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>													
21B. 1,3 - Dichlorobenzene (541-73-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>													

MO 780.1316 (6-04)

PAGE 3

CONTINUE ON PAGE 3

NA - This will be a no-discharge facility; therefore, no outfalls.

CONTINUED FROM THE FRONT

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"			3. EFFLUENT						4. UNITS		5. INTAKE (optional)			
	A. TESTING AND REPORTED	B. RE-LEACHED FROM SEWER	C. RE-LEACHED FROM SEWER	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE (if available)		C. LONG TERM AVERAGE VALUE (if available)		D. NO. OF ANAL. YES	A. CONCEN- TRATION	B. MASS	A. LONG TERM AVERAGE		B. NO. OF ANAL. YES
				(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
GC/MS FRACTION - PESTICIDES															
43B, N-Nitro-sodiphenylamine (96-30-6)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												
44B, Pnenanthrene (85-01-8)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												
45B, Pyrene (129-00-0)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												
45B, 1,2,4-Trichlorobenzene (120-82-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												
1P, Aldrin (309-00-2)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												
2P, α-BHC (319-84-6)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												
3P, β-BHC (319-84-6)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												
4P, γ-BHC (58-89-9)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												
5P, δ-BHC (319-86-8)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												
6P, Chlordane (57-74-9)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												
7P, 4,4'-DDT (50-29-9)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												
8P, 4,4'-DDE (72-85-9)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												
9P, 4,4'-DDD (72-84-8)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												
10P, Dieldrin (60-57-1)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												
11P, 6-Endosulfan (115-29-7)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												
12P, β-Endosulfan (115-29-7)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												
13P, Endosulfan Sulfate (1031-07-8)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												
14P, Endrin (72-20-8)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												
15P, Endrin Aldehyde (7421-93-4)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												
16P, Heptachlor (76-44-8)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												

MO 7801316 (6-03)

PAGE 7

CONTINUED ON PAGE 8

2.00 POTENTIAL DISCHARGES NOT COVERED BY ANALYSIS

A. IS ANY POLLUTANT LISTED IN ITEM 1.30 A SUBSTANCE OR A COMPONENT OF A SUBSTANCE WHICH YOU DO OR EXPECT THAT YOU WILL OVER THE NEXT FIVE YEARS USE OR MANUFACTURE AS AN INTERMEDIATE OR FINAL PRODUCT OR BYPRODUCT?

YES (LIST ALL SUCH POLLUTANTS BELOW) NO (GO TO B) NA - This will be a no-discharge facility.

B. ARE YOUR OPERATIONS SUCH THAT YOUR RAW MATERIALS, PROCESSES OR PRODUCTS CAN REASONABLE BE EXPECTED TO VARY SO THAT YOUR DISCHARGES OF POLLUTANTS MAY DURING THE NEXT FIVE YEARS EXCEED TWO TIMES THE MAXIMUM VALUES REPORTED IN ITEM 1.30?

YES (COMPLETE C BELOW) NO (GO TO SECTION 3.00) NA - This will be a no-discharge facility.

C. IF YOU ANSWERED "YES" TO ITEM B, EXPLAIN BELOW AND DESCRIBE IN DETAIL THE SOURCES AND EXPECTED LEVELS OF SUCH POLLUTANTS THAT YOU ANTICIPATE WILL BE DISCHARGED FROM EACH OUTFALL OVER THE NEXT FIVE YEARS, TO THE BEST OF YOUR ABILITY AT THIS TIME. CONTINUE ON ADDITIONAL SHEETS IF YOU NEED MORE SPACE.

NA

3.00 CONTRACT ANALYSIS INFORMATION NA - This will be a no-discharge facility.

WERE ANY OF THE ANALYSES REPORTED IN 1.30 PERFORMED BY A CONTRACT LABORATORY OR CONSULTING FIRM?

YES (LIST THE NAME, ADDRESS, AND TELEPHONE NUMBER OF, AND ANALYZED BY, EACH SUCH LABORATORY OR FIRM BELOW)
 NO (GO TO SECTION 4.00)

A. NAME	B. ADDRESS	C. TELEPHONE (area code and number)	D. POLLUTANTS ANALYZED (list)

4.00 CERTIFICATION

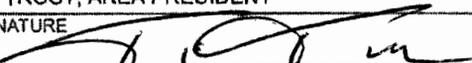
I CERTIFY UNDER PENALTY OF LAW THAT I HAVE PERSONALLY EXAMINED AND AM FAMILIAR WITH THE INFORMATION SUBMITTED INT HIS APPLICATION AND ALL ATTACHMENTS AND THAT, BASED ON MY INQUIRY OF THOSE INDIVIDUALS IMMEDIATELY RESPONSIBLE FOR OBTAINING THE INFORMATION, I BELIEVE THAT THE INFORMATION IS TRUE, ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT.

NAME AND OFFICIAL TITLE (TYPE OR PRINT)
TIM TROST, AREA PRESIDENT

PHONE NUMBER (AREA CODE AND NUMBER)
314-739-5099

SIGNATURE

DATE SIGNED



01/25/11



MISSOURI DEPARTMENT OF NATURAL RESOURCES
 WATER PROTECTION PROGRAM, WATER POLLUTION BRANCH
 (SEE MAP FOR APPROPRIATE REGIONAL OFFICE)
**FORM I - PERMIT APPLICATION FOR CONSTRUCTION AND
 OPERATION OF WASTEWATER IRRIGATION SYSTEMS**

FOR AGENCY USE ONLY	
PERMIT NUMBER	
MO -	
DATE RECEIVED	

INSTRUCTIONS: The following forms must be submitted with Form I: FORM B for domestic wastewater. Submit FORMS E and G for land disturbance permit if construction areas total one acre or more.

1.00 FACILITY INFORMATION

1.10 Facility Name **JEFFCO LANDFILL**

1.20 Application for: Construction Permit (attach Engineering report, Plans and Specifications per 10 CSR 20-8)
 Operating Permit (if no construction permit, attach engineering documents)
 Date Irrigation System Began Operation: 4/1/08
 Operating Permit Renewal

1.30 Type of wastewater to be irrigated: Domestic Municipal State/National Park Seasonal business
 Municipal with Pretreatment Program or Significant Industrial Users Other (explain) **SOLID WASTE LANDFILL LEACHATE**
 SIC Codes (list all that apply, in order of importance) 4953

1.40 Months when the business or enterprise will operate or generate wastewater:
 12 months per year Part of year (list Months): _____

1.50 This system is designed for:
 No-discharge Partial irrigation when feasible and discharge rest of time.
 Irrigation during recreation season (April - October) and discharge during November - March.
 Other (explain) SEE ATTACHED DESCRIPTION

1.60 List the Facility outfalls which will be applicable to the irrigation system from outfalls listed on Form B.
 Outfall Nos. _____ No discharge facility; therefore, no outfall.

2.00 STORAGE BASINS

2.10 Number of storage basins: 1 Type of basin: Steel Concrete Fiberglass Earthen
 Earthen with membrane liner

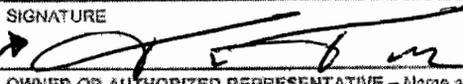
2.20 Storage basin dimensions at inside top of berm (feet): Report freeboard as feet from top of berm to emergency spillway or overflow pipe.
 (Complete Attachment A: Profile Sketch) See attached Plates 2 and 3.
 Basin #1: Length _____ Width _____ Depth _____ Freeboard _____ Berm Width _____ % Slope _____
 Basin #2: Length _____ Width _____ Depth _____ Freeboard _____ Berm Width _____ % Slope _____

2.30 Storage Basin operating levels (report as feet below emergency overflow level) See attached Plates 2 and 3.
 Basin #1: Maximum water level _____ ft. Minimum operating water level _____ ft.
 Basin #2: Maximum water level _____ ft. Minimum operating water level _____ ft.

2.40 Depth of sludge in lagoons and storage basins _____ ft. Particulate matter (iron) is expected to settle in adjacent sump prior to leachate flowing to the retention basin. Little to no sludge will be generated.
 Total sludge stored _____ dry tons _____ cu. ft.

3.00 LAND APPLICATION SYSTEM

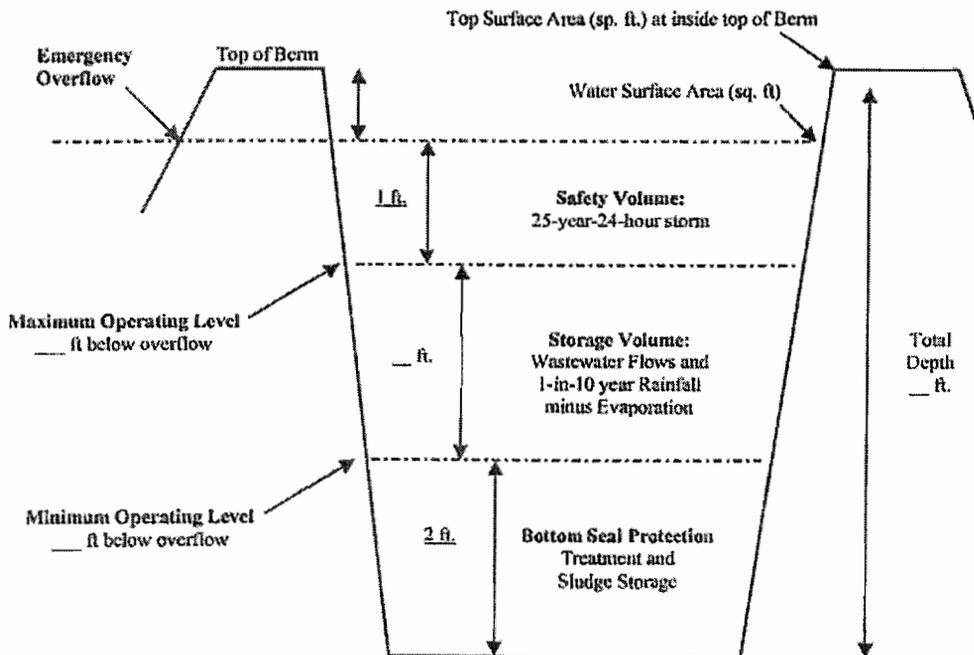
3.10 Number of irrigation sites 1 Total Acres 5.7 Maximum % field slopes 9%
 Location: NE ¼, SW ¼, SW ¼, 22 Sec. 43N T 5E R Jefferson County 5.7 Acres
 Location: _____ ¼, _____ ¼, _____ ¼, _____ Sec. _____ T _____ R _____ County _____ Acres

3.11 Type of vegetation: <input type="checkbox"/> Grass hay <input checked="" type="checkbox"/> Pasture <input checked="" type="checkbox"/> Timber <input type="checkbox"/> Row crops <input type="checkbox"/> Other (describe) _____	
3.20 Wastewater flow (dry weather) gallons/day: Average annual: <u>12,000</u> Seasonal _____ Off-season _____ Months of seasonal flow: _____ Human Population Equivalent: <u>NA</u>	
3.21 Land Application rate per acre (design flow including 1 in 10 year storm water flows): Design: _____ inches/year _____ inches/hour _____ inches/day _____ inches/week Actual: <u>28.7</u> inches/year <u>.003</u> inches/hour <u>.079</u> inches/day <u>.553</u> inches/week Total Irrigation per year (gallons): _____ Design <u>4.5MM</u> Actual Actual months used for Irrigation (check): <input checked="" type="checkbox"/> Jan <input checked="" type="checkbox"/> Feb <input checked="" type="checkbox"/> Mar <input checked="" type="checkbox"/> Apr <input checked="" type="checkbox"/> May <input checked="" type="checkbox"/> Jun <input checked="" type="checkbox"/> Jul <input checked="" type="checkbox"/> Aug <input checked="" type="checkbox"/> Sep <input checked="" type="checkbox"/> Oct <input checked="" type="checkbox"/> Nov <input checked="" type="checkbox"/> Dec	
3.22 Land Application Rate is based on: <input type="checkbox"/> Nutrient Management Plan (N&P) <input type="checkbox"/> Hydraulic Loading <input checked="" type="checkbox"/> Other (describe) <u>AVAILABILITY OF LEACHATE AND SEASON</u>	
3.30 Equipment type: <input type="checkbox"/> Sprinklers <input type="checkbox"/> Gated pipe <input type="checkbox"/> Center pivot <input type="checkbox"/> Travelling gun <input checked="" type="checkbox"/> Other (describe) <u>Surface & Subsurface Driplines</u> Equipment Flow Capacity: <u>6,500</u> Gallons per hour <u>5,500</u> Total hours of operation per year	
3.40 Public Access Restrictions for irrigation sites: <input checked="" type="checkbox"/> Site is Fenced <input type="checkbox"/> Wastewater disinfection prior to irrigation <input type="checkbox"/> Other (describe): _____	
3.50 Separation distance (in feet) from the outside edge of the wetted irrigation area to down gradient features: > <u>1 M</u> Permanent flowing stream <u>NA</u> Losing Stream <u>300</u> Intermittent (wet weather) stream > <u>1 M</u> Lake or pond <u>630</u> Property boundary <u>1700</u> Dwellings <u>3700</u> Water supply well _____ Other (describe) _____	
3.60 SOILS INFORMATION: Use information from the County Soil Survey, NRCS, or professional soil scientist. Soil Series Name _____ Depth of bedrock _____ Feet Depth of water table _____ Feet <u>NA</u> -The irrigated area is within the former landfill footprint. Soil Infiltration rate in inches/hour (in/hr) for most restrictive layer within the following soil depth ranges: _____ in/hr for 0-12 in soil depth _____ in/hr for 12-24 inch soil depth _____ in/hr for 24-60 inch soil depth	
3.70 Include a recent Geologic Report by the Department's Geological Survey and Resource Assessment Division with your construction permit. <u>NA</u> - The irrigated area is within the former landfill footprint.	
3.80 Attach a current copy of the Operation and Maintenance (O&M) Plan for the irrigation system. Date of O&M Plan: <u>2/1/10</u>	
3.81 Attach a site map showing topography, storage basins, irrigation sites, property boundary, streams, wells, roads, dwellings and other pertinent features. See attached Plates 1 through 5.	
3.82 Attach a facility sketch showing treatment units, storage basins, pipelines, irrigation equipment, application sites and other features. See attached Plates 1 through 5.	
4.00 CERTIFICATION I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attachments and that based on my inquiry of those individuals immediately responsible for obtaining this information, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine or imprisonment.	
CONSULTING ENGINEER - Name, Official Title and Engineering Firm (TYPE OR PRINT) DANIEL R. FEEZOR, P.E. - PRESIDENT - FEEZOR ENGINEERING, INC.	TELEPHONE NUMBER (area code and number) 217-483-3118
SIGNATURE 	DATE SIGNED 01/25/11
OWNER OR AUTHORIZED REPRESENTATIVE - Name and Official Title (TYPE OR PRINT) TIM TROST, AREA PRESIDENT	TELEPHONE NUMBER (area code and number) 314-739-5099
SIGNATURE 	DATE SIGNED 01/26/11

ATTACHMENT A

(To be included with Form I)

**Lagoon or Storage Basin
PROFILE SKETCH**



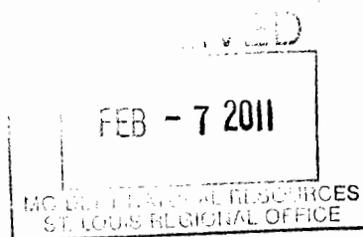
DEFINITION OF TERMS (REFER TO THE PROFILE SKETCH ABOVE).

- a. Freeboard is depth from top of berm to emergency spillway (minimum 1 foot);
- b. Safety Volume is depth for 25-year, 24-hour storm (minimum of 1 foot);
- c. Maximum Operating Level is at bottom of the safety volume (minimum of 2 feet below top of berm).
- d. Minimum Operating Level is 2 feet above bottom of lagoon for seal protection per 10 CSR 20-8.
The minimum operating level may be greater than 2 feet when additional treatment volume is included.
- e. Storage Volume and days storage are based on the volume between Minimum and Maximum Operating Levels.
- f. Total Depth is from top of berm to bottom of basin including freeboard.



January 27, 2011

Mr. Mike Struckhoff
Regional Director
Missouri Department of Natural Resources
St. Louis Regional Office
7545 South Lindbergh, Suite 210
St. Louis, Mo 63125



Re: BFI Service Group
JeffCo Landfill – Flow Equalization
Jefferson County (WP)
Construction Permit CP-0000801
Signed MDNR Forms

Dear Mr. Struckhoff:

Enclosed is a completed MDNR Form A, Form D, Form C, and Form I needed to grant the Operating Permit for the JeffCo Landfill facility. On behalf of our client, BFI Service Group, we hereby request a review of this document.

If you have any questions or comments, please contact me at (217) 483-3118 at your convenience.

Sincerely,

George Frauli
Construction Services Manager

CC: Brian Power, BFI Service Group

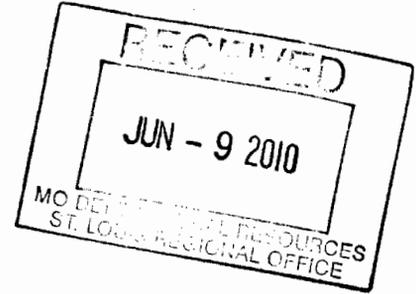


LEGGETTE, BRASHEARS & GRAHAM, INC.

PROFESSIONAL GROUND-WATER AND ENVIRONMENTAL ENGINEERING SERVICES

4850 LEMAY FERRY ROAD, SUITE 205
ST. LOUIS, MO 63129
314-845-0535
FAX 314-845-3573
www.lbgweb.com

June 9, 2010



Mr. Steven Lang
Environmental Engineer
Missouri Department of Natural Resources
St. Louis Regional Office
7545 South Lindbergh Boulevard, Suite 210
St. Louis, Missouri 63125

Re: Permit Application for a No-Discharge Facility
Jeffco Landfill Phytoirrigation System
Jefferson County, Missouri

Dear Mr. Lang:

Leggette, Brashears & Graham, Inc. (LBG) and Republic Services, Inc. (RSI) met with you in November 2009 to discuss a preliminary design concept and permitting requirements for a proposed leachate retention basin at the Jeffco Landfill. At that time, you provided an option for application for a no discharge permit through the Concentrated Animal Feed Operation unit (CAFO) within Missouri Department of Natural Resources (MDNR) Water Resources Division. After subsequent discussion with MDNR representatives Curtis Gately, John Rustige and Keith Forck, LBG understands that the construction and no-discharge permit applications should be sent to you at the MDNR – St. Louis Regional Office (SLRO).

Project Background

The Jeffco Landfill is a closed, non-permitted pre-Subtitle D landfill owned by RSI's subsidiary BFI Services Group. RSI performs various maintenance activities at the site including cap maintenance and mowing. Historically, leachate was collected through a leachate collection system, stored within tanks on the site, and hauled/disposed at a local publically-owned treatment works. In 2008, RSI constructed a phytoirrigation system within the solid waste landfill footprint, with the intention of reducing, and eventually eliminating off-site leachate disposal. This was done by planting approximately 2,000 hybrid poplars and willows on the landfill which had been specifically engineered for uptaking leachate. The phytoirrigation system included the

installation of surface and subsurface drip irrigation lines that would distribute the leachate, pumped from a sump at the toe of the landfill. While the trees have been established on the landfill and have grown remarkably, portions of the phytoirrigation system require additional infrastructure to operate with maximum efficiency. Specifically, during times of excess precipitation, this closed-loop system still must store and truck leachate. During extended dry periods, there may not be sufficient leachate to irrigate the trees. For this reason, RSI instructed LBG to design a leachate retention basin.

Proposed Project Description

The proposed project includes construction of a 1 million gallon lined, bermed leachate basin, a new sump and all appurtances. The footprint of the construction is less than one acre. The sump will receive piped leachate from the leachate collection system and pump that leachate to the tree irrigation system. During times of excess precipitation where the sump receives more leachate than what can be irrigated, the leachate will be directed to the adjacent leachate retention basin. During extended dry periods, leachate can be allowed to flow from the leachate basin to the sump for distribution to the irrigation system.

The leachate retention basin has been designed with a maximum fluid level of 608.5 feet above mean sea level (AMSL), with the top of surrounding berms designed for 610 feet AMSL. The 1.5 feet of freeboard is sufficient to accommodate a 100-year, 24-hour storm event. Within the sump, a series of floats and high/low water level alarms have been integrated into the system. An overflow pipe within the sump discharges water back to the leachate basin. Although the design incorporates a sufficient freeboard to accommodate a 100-year, 24-hour storm even at the high fluid level, in an emergency situation, leachate can be pumped to a 22,000-gallon storage tank and hauled/disposed off-site, if needed.

As noted above, this will be a no-discharge facility/operation, and the phytoirrigation system will remain a closed loop system. Plates 1 through 5 (attached) show the leachate basin design and general construction sequence.

Permit Applications

MDNR representative Mr. Keith Forck stated that LBG should submit the following permit application forms:

- Form A – Application for Construction or Operating Permit Under Missouri Clean Water Law
- Form C – Application for Discharge Permit – Manufacturing, Commercial, Mining and Silvicuture Operations
- Form D – Application for Discharge Permit – Primary Industries

- Form I – Permit Application for Construction and Operation of Wastewater Irrigation Systems

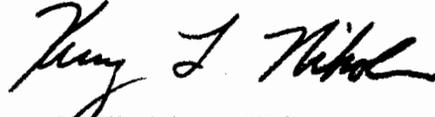
Inasmuch as the proposed operation will not discharge any effluent (i.e., no-discharge facility), there will be no outfalls. Therefore, a large proportion of permit application Forms A, C and D do not apply, and have been labeled as such.

A land disturbance permit, referenced in Form I, is not required as the construction footprint is less than one acre.

Permit application forms A, C, D and I are provided as attachments to this letter. Other attachments are noted below. With this submittal, LBG seeks approval of the application for a construction permit, and approval of a no-discharge operating permit.

Should you have any questions regarding this submittal, please don't hesitate to call me.

Very truly yours,



Kerry J. Nikolaisen, CPG
Senior Hydrogeologist

Reviewed and affirmed by:



John L. Bogнар, CPG
Senior Associate

Attachments: Form A – Application for Construction or Operating Permit Under Missouri Clean Water Law
Form C – Application for Discharge Permit – Manufacturing, Commercial, Mining and Silviculture Operations
Attachment to Form C – Water Balance Flow Diagram
Form D – Application for Discharge Permit – Primary Industries
Form I – Permit Application for Construction and Operation of Wastewater Irrigation Systems
Plate 1 – Site Map of Leachate Basin – Existing Conditions
Plate 2 – Construction Plan for Leachate Basin
Plate 3 – Construction Details – Dry Vault & Leachate Sump
Plate 4 – Basin Construction Details
Plate 5 – Phytoirrigation System Diagrams
Phytoirrigation System O&M Plan (on CD)

Mr. Steven Lang

4

June 9, 2010

CC: Mr. Brian Power – Republic, Roxanna, IL

N:\Word Processing\Clients\Active\Allied Republic\Jeffco\cover letter to MDNR w permits.doc

See maps

in file